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ABSTRACT

An exploration of the decision-making processes of state legislators on public school finance issues focuses on major school finance changes that occurred in Michigan in 1973 and in Washington and Missouri in 1977. Roll call votes, primarily in the lower chambers of the state legislatures, on both selected amendments and the complete versions of the bills are examined. The influence and characteristics of those legislators who were instrumental in pushing the three major pieces of legislation through the legislative process in each of the three states are also examined. The final comparison, to check if legislators respond in a consistent manner to economic and political forces in their districts across different issues, is of state certificate-of-need legislation of the health care industry in Washington in 1971 and in Missouri in 1977. Chapters 1 and 2 examine the relevant legislative voting behavior literature and set out the expectations for each of the major theories governing the field. Chapter 3 describes the methodology; chapters 4, 5, and 6 describe the results of the analysis of school finance votes in the three states. Chapter 7 presents the results of the policy leadership analysis. Chapter 8 describes the results of the comparative analyses that were undertaken. And finally, chapter 9 presents a synthesis of the results and the conclusions that can be drawn. (MLF)

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Working Paper No. 1

STATE LEGISLATIVE VOTING AND LEADERSHIP: THE POLITICAL ECONOMY OF SCHOOL FINANCE

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STATE LEGISLATIVE VOTING AND LEADERSHIP: THE POLITICAL ECONOMY OF SCHOOL FINANCE

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There are a number of advantages of doing this type of study in a state-based organization. One of the most obvious is the quick access that one has to individuals who know education policy makers in the various states. Special thanks in this regard goes to Bob McCall and Gloria Frazier of ECS, who were able to suggest key individuals in each of the three states from whom we were able to identify additional informants. Further, it is difficult to overestimate the importance of those individuals who sat and talked with us about the school finance reform efforts in each of the three states that were analyzed. Interpretation of the statistical results were very much dependent upon knowing the important parts of the story behind the reform effort. Those interviewed gave us that knowledge. The names of those interviewed are listed in the appropriate sections of the text.

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INTRODUCTION

> [This] Court has deemed it necessary to refrain from expressing an opinion as to the appropriateness of any particular means or technique for attaining a suitable school finance system in this state believing that "the ultimate solution must come from the lawmakers and from the democratic pressures of those who elect them." Statement by the Honorable L. Kingsley Smith in Levittown v. Nyquist, p. 104.

Much of what is public policy today results from a series of decisions made at the state level of our intergovernmental structure. A large portion of those decisions emanate from the state legislature. The purpose of the present study is to focus on the decision-making processes of state legislators on public school finance issues. There are several reasons for focusing on the behavior of state legislators in this policy area. The first is that public schools, and here we are referring to K-12 education, are larger consumers of revenues than any other state public service function.

A second reason for examining state legislative voting behavior is the fact that keen competition exists among education interests for influencing the aid distribution policy which each legislature must adopt every one or two years. This competition exists among the established education interest groups such as teachers, administrators, school board members, etc., and among property owners, taxpayers and parents of children in schools. Although the dynamics of these two groups -- the organized and the not so organized interests -- differ substantially, state legislators do have to pay attention to these interests when planning their voting strategy on school finance legislation.

In addition to the interests mentioned above, another important political force that is factored into the decision calculus of state legislators is the incremental nature of policy making in state political institutions. Changes in the funding structure of public schools tend to be related to the funding structure that was previously in place and to other aspects of the political culture of the state. Major dislocations in aid flows do not usually occur.

The third major reason for undertaking a study of legislative voting behavior on school finance issues is that a large number of theories exist, with roots in both the economics and political science literatures, which need to be tested. The theories need to be compared to each other and across settings in order to determine which is the "most appropriate model" for studying state legislative voting and what that model tells us about the decision-making processes of state legislatures. What has tended to occur in the past is that an author from either discipline would choose a particular model that s/he felt was most appropriate and then would proceed to draw implications from it without ever really taking into consideration the concerns implied by other models. This lack of comparative design has hindered the study of legislative voting behavior and it is hoped that the research that follows will shed some light on the appropriate and inappropriate ways of modeling state legislative voting behavior.

In the following chapters, three major school finance changes will be examined. The first occurred in the state of Michigan in 1973 (SB 110, also known as the Bursley Act). The second and third major changes occurred in 1977 in the states of Washington (HB 960) and Missouri (HB 131). In each of these three settings, roll call votes on both selected amendments and the complete versions of the bill will be examined. Some of these votes moved large amounts of money among school districts by reallocating dollars in a zero sum fashion. Other votes pumped in additional amounts of money and, as a result, substantially reduced the number of school districts that lost state aid under the new formula. Some of the amendments to be examined focused on changing the distributional nature of the school funding formula, while others focused on how local school districts could use the money once they had received it. For the most part, the study focuses on legislative activity in the lower chamber of the state legislature in question. The lower chamber was chosen because the larger number of legislators in the House permits more elaborate statistical analyses and because the reelection schedule -- every two years -- requires that legislatures pay considerable attention to this issue, which also is addressed on a similar schedule.

In order to control for the special circumstances that arise in a chamber during each legislative session, the study was designed to allow the following comparisons between different types of votes. The first and most obvious level of comparison is across the three states that engaged in major school finance reform during the mid-1970s. A second comparison is between the votes on HB 131 in Missouri in the House and in the Senate. A third level of comparison, also only for the state of Missouri, is between HB 131 in 1977 and a previous attempt to reform school finance laws in 1975, HB 350. The final comparison is an examination of certificate-of-need legislation for the health care industry in the states of Washington and Missouri in 1971 and 1977, respectively. This final analysis compares the results on social welfare (but nonschool-related) legislation with what had been found about the voting behavior on the school finance reform legislation in these states.

In addition to looking at the positions of individual legislators on a variety of amendments and complete bills, the study also focused on legislators who were instrumental in pushing the three major pieces of legislation in each of the three states through the legislative process to enactment. Ratings of how important a role a particular legislator played in the passage of these major school finance bills were obtained from informants in each of the three states. Characteristics of the legislator and of the legislative district were then analyzed to determine if any particular measures were systematically related to the participation rating score.

Finally, it would be appropriate here to illustrate the range of school finance decisions that legislators were faced with during the debate on the major school finance reforms in each of the three states. First, the nature of the major reform bills themselves differ dramatically from state to state: in Michigan the district power equalizing approach was adopted (also called equal yield or guaranteed tax base approach); in Missouri the legislature moved from a straight foundation approach to a foundation plus guaranteed tax base add-on; and in Washington the legislature shied away from the adoption of a traditional funding formula and opted to define basic education and then fund 100 percent of it. At the amendment level a number of different issues were raised. In Washington and Missouri one of the major issues was how much of the newly generated state revenue would go to personnel salary increases. In the state of Michigan an amendment was introduced to fund special education by formula. In the states of Washington and Missouri two factors were considered that would have dramatically altered the flow of aid to districts. The addition of an urban, rural, racial and disadvantaged education program to the definition of basic education was introduced in Washington and a cost-of-education index was considered in Missouri. In Washington, an amendment was introduced to adjust the basic education grant for increasing and/or declining enrollments. Pupil transportation and the use of revenue from fines and intangible taxes were the subject of amendments in Missouri. This partial list of issues illustrates the considerable range of topics on which state legislators needed to make decisions during the school finance reform process.

The present study has contributed in a number of ways to furthering the study of state legislative behavior. The focus on decision making in state legislatures within the context of school finance issues has allowed comparisons to be made across state boundaries, across chambers, over time and across both school finance issues and hospital related issues. This extensive network of comparisons has led to a more comprehensive understanding of state legislative behavior, e.g., the distinctly different role of the political party and the influence of political culture in each state. In addition to the comparative logistic regression analysis, the study employed an extensive interview process to enhance the validity of the results presented. Finally, in addition to looking at the votes on the various school finance issues, the influence of and characteristics of those legislators who hold the positions of policy leadership in the area of public school finance were examined. The data collection effort and the mapping of that information into legislative districts were also major accomplishments of the study.

The chapters that follow are organized in the following manner. Chapters I and II examine the relevant legislative voting behavior literature and set out the expectations for each of the major theories governing the field. Chapter III describes the methods used to execute the analysis that was undertaken. Chapters IV, V and VI describe the results of our analysis of school finance votes in the states of Michigan, Missouri and Washington. Chapter VII presents the results of the policy leadership analysis. Chapter VIII describes the results of the comparative analyses that were undertaken. And finally, Chapter IX presents a synthesis of the results and the conclusions that can be drawn.

I. LEGISLATIVE VOTING BEHAVIOR: A SUMMARY OF THE ECONOMICS AND THE POLITICAL SCIENCE LITERATURES

Legislative bodies have been the object of close scrutiny by political observers from the philosophers of the 18th century to modern day political analysts. Economists and political scientists, especially during the past 70 years, have examined the role of legislative bodies in the policy-making process and, to some extent, the behavior of individual legislators within those bodies. Unfortunately, both disciplines have pursued these studies independently of each other. However, there are several similarities in approach between the two disciplines that have encouraged the present study in its pursuit of an interdisciplinary perspective on the study of legislative voting behavior.

One major point of overlap between the economic and political science approaches to the study of legislative voting behavior is the concern over self-interest in the legislative setting. The focus of this concern can vary from the straightforward effort to direct more state funds toward the legislator's own district, to the more complicated effort on the part of the legislator to maximize his/her chances for reelection by satisfying particular interest groups. A second point of overlap between the two disciplines is their concern over the interest group process in the political arena. During the past 50 years, the number of interest groups participating in the political system of the United States has increased dramatically. This is true at the federal level where interest group interactions with the legislative and executive branch of the government are reported daily. In addition, an increased and growing presence of interest groups can also be found at the state level. The richness of the present study lies in the fact that the impact of education interest groups upon legislative behavior will be considered along with district characteristics, changes in aid and the influence of other legislators.

In this chapter, the groundwork for an interdisciplinary approach to the study of legislative voting behavior will be delineated. The first three parts of the chapter review existing studies. The first examines works by economists. The second describes studies by political scientists. The third focuses on more general studies of state legislative activity. In the final section, an attempt will be made to pull together the various common themes in the studies that have been reviewed in order to lay the groundwork for building an interdisciplinary model of state legislative voting behavior.

Economic Theories Concerning Legislative Voting Behavior

Economists have attacked the problem of government, and legislative activity in particular, in three different ways. The first and oldest of these approaches is through the concept, economic self-interest. In the case of economic self-interest, political actors, be they voters, legislators or executives, focus their energies on transmitting information to the decision maker through their votes, or on deciding what is in their rational self-interest if they are a principal decision maker. Leading contributions to this literature will be reviewed in the first section.

A second group of economists have paid particular attention to the interaction of interest groups and to what they have called the "market" for legislative action. The contributions in this area will be reviewed in the second section below.

A third set of economists have focused on the concept of political man. This literature evolved from an integration of the economic self-interest model and the increasing interest in the application of mathematical models to human behavior. These studies will be reviewed in the third section below.

Economic Self-Interest: Direct Economic Benefit and Median Voter

Two major contributions have come out of the economic self-interest school. The first of these was by Anthony Downs in 1957 in his book entitled An Economic Theory of Democracy. The second has been refined by a number of authors and is commonly known as the median voter model. The Downs' contribution will be examined first.

In An Economic Theory of Democracy, Downs sought to elucidate how democratic states are governed by identifying the role of political parties and the voters found within those democracies. The author's entire effort is to account for what political parties and voters do. The critical assumption that Downs makes is that political parties and voters act rationally in pursuit of certain clearly specified goals. The author explains the meaning of the term "rational" in the following manner:

> Whenever economists refer to a "rational man," they are not designating a man whose thought processes consist exclusively of logical propositions, or a man without prejudices, or a man whose emotions are inoperative. In normal usage, all of these could be considered rational men. But the economic definition refers solely to a man who moves toward his goals in a way which, to the best of his knowledge, uses the least possible input of scarce resources per unit of valued output (1957, p. 5).

In essence, Downs introduced a "homo politicus," the average man in the electorate and the rational citizen in his model democracy.

Through his book, Downs attempted to fill a gap in economic theory which at the time had produced no satisfactory rules of behavior for governments. Government, he pointed out, has many legitimate roles other than passively presiding over income transfers. Further, by pointing out that rational self-interest is the relationship between the individual and societal ends, he was able to debunk the notion that governments must be run from some independent ethical perspective (1957, p. 20). The implication of the Downs' contribution for the present study is that legislators, like other governmental agents, are capable of acting in behalf of their districts or their individual interest.

Another theory that has employed the rational voter assumption has been the median voter model. The median voter model (Black, 1958; Bowen, 1943; Hotelling, 1929) has been used by economists in their examination of political activities from presidential elections to local expenditure decisions. The assumptions underlying the median voter model can be described in the following manner. Each voter is always assumed to vote for his preferred alternative. It is also assumed that alternatives can always be represented in terms of a single dimension, i.e., liberal-conservative or higher to lower expenditures. It is also assumed that all voters have single preference points along the dimension. Therefore, a voter's ideal point is found by choosing his or her most preferred alternative among all feasible alternatives along the dimension. The median ideal point to any alternative is the point such that less than one-half of the voters have ideal points below it in the ordering and that less than one-half of the voters have ideal points above it. It follows that a simple majority vote between the median ideal point and any other alternative on a given issue is a situation in which the median voter will never lose (Romer and Rosenthal, 1978, pp. 3-4). The economic benefit model and the median voter model are indicative of the early attempts by economists to understand the political process.

The Market Approach

Economists have developed two explanations of the role of government in the economy using the "market" concept. The first is generally labeled the market failure approach, and the other is labeled the public choice, or interest group approach. Both are used in an attempt to understand why government exists and why it undertakes the functions that it performs. The market failure approach developed from the works of Pigou. The approach stresses two questions. The first is why the market economy fails to properly allocate and distribute resources across the various participants in the economy. The second explores how the government should intervene in the private economy in order to correct market failures and distributional shortcomings.

> In the Pigovian approach the state is a productive entity that produces public goods, internalizes social costs and benefits, regulates decreasing cost industries effectively, redistributes income Pareto optimally, and so forth (McCormick and Tollison, 1981, p. 3).

Critics have spotted a number of easy targets in the Pigovian model. First, the Pigovian approach assumes an all-knowing, benevolent government. Second, in addition to the assumption that the government accesses and uses all relevant information, it is also assumed the government is able to correct imperfect markets in a perfect and costless manner. These two assumptions are difficult to accept for anyone familiar with the workings of the contemporary political process.

The interest group approach to the study of politics, on the other hand, implies that the behavior of political actors within a given political institution can be usefully analyzed by assuming that individual economic agents obey the postulates of self-interest generally, whether they are participating in a private market setting or not. In other words, politicians are no different than anyone else, they are simply economic agents who respond to the demands of their institutional environment in predictable ways. Viewed in the legislative setting, this analysis is a model of the demand and supply of legislation of all varieties. The important difference between the market and the political setting has little to do with the motivations of individual actors, but rather consists of more severe constraints being placed on the individual in the free market, since in the political setting, the individual does not always bear the full consequences of his/her decisions.

In simplest form, interest group theory has been around for quite some time (for a review of the literature on the subject, see Posner, 1974). This theory is often presented in terms of economic regulation because it was designed to explain the pattern of regulatory intervention of government in the economy. In the earlier versions of the theory, it was assumed that government always acted in the public interest. However, after it became obvious that the public interest was not necessarily the interest being served, the capture theory of economic regulation was put forth. It acquired its name because it theorized that producers who were small in number and had much to gain from legislative protection would organize and be successful at gaining protection at the expense of consumer-voters. Capture theory, in this simple formulation, seemed to be related to Marxist theory, in the sense that capital uses, i.e., captures, the state in order to transfer income from labor to itself. George Stigler in his pioneering paper in the area, clarified how various interests use the state to increase their wealth.

George Stigler, in his 1971 article entitled "The Theory of Economic Regulation," changed the perspective on the role that government plays in the regulatory process. He contended that, "as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit" (1971, p. 3). Stigler also argued that the problem of regulation is not a question of determining the proper role of government but rather is the problem of discovering when and why an industry or any other group of like-minded individuals are able to use the state for their own purposes or are singled out by the state to be used for the purposes of others.

Stigler goes on to list the advantages and disadvantages of groups seeking benefits through state intervention. On the benefit side, the state can provide a number of protections to various interest groups. These benefits include direct monetary subsidies; control over the entry of rival groups, organizations or industries; control over substitute services and complementary services; and a degree of price fixing for various services. On the other hand, there are a number of limitations associated with these political benefits. The limitations include the following: the distribution of the control of the industry or service among existing firms is altered; the entrance into the political process is not a costless activity; and the political process automatically admits powerful demands from outside the industry or service into the policy deliberations. Further, from the perspective of the legislator, it is in his/her best interest to identify a coalition of voter interests that is durable from election to election, rather than responding to pressure from groups on an issue-by-issue basis. It is also true, however, that voter preferences are less precisely stated than interest group preferences and therefore legislators are more likely to respond to stable interest group preferences.

Stigler had a number of important observations in regards to the size of industries that could effectively seek protective legislation. He stated "that the costs of legislation probably increase with the size of the industry seeking the legislation"

(1971, p. 12), due to the fact that larger industries tend to seek programs that cost society more and arouse more opposition from the other affected groups. However, he saw the greatest disadvantage falling upon the smallest industries who are effectively precluded from the political process because they cannot meet the minimum cost of obtaining legislation. Stigler concluded with a warning to those who would undertake reform in the name of unorganized consumers. Until the pitfalls of unorganized groups are realized, "reformers will be ill equipped to use the state for their reforms, and victims of the pervasive use of the state's support of special groups will be helpless to protect themselves" (1971, p. 18).

The most important subsequent contribution to the theory of economic regulation is a 1976 paper by Sam Peltzman entitled "Toward a More General Theory of Regulation." In his paper, Peltzman moves Stigler's theory of regulation forward on a number of fronts. Peltzman states that "Stigler seems to have realized that the earlier 'consumer protection' model comes perilously close to treating regulation as a free good" (1976, p. 212). Stigler's work "... is ultimately a theory of the optimum size of effective political coalitions set within the framework of a general model of the political process" (1976, p. 212). Peltzman further states that "the essential commodity being transacted in the political market is a transfer of wealth, with constituents on the demand side and their political representatives on the supply side" (1976, p. 212).

The critical question for the new "theory of regulation" is to explain the regularity of small group dominance in the political process. Obviously the answer lies in the relationship between group size and the costs of using the political process. Peltzman lists a series of reasons why there are size limitations on the dominant group in the political process. His reasons include the following: voting in elections is an infrequent occurrence, and as a consequence, is generally concerned with a package of issues rather than giving any directives on a particular issue; the costs of organization rise much faster than the corresponding increase in group membership, thereby making it much harder to organize larger groups; the larger the group that seeks the transfer, the narrower the base and the greater the strength per capita of the opposition; and the cost of overcoming the free rider problem also rises faster than group size. In addition to the limitation on the size of the dominant group, Peltzman argues that there is also a limitation on the amount that any group expects to gain through the political process. As a result, Peltzman has pointed out an important additional principle of regulation:

> Even if a single economic interest gets all of the benefits of regulation, these must be less than a perfect broker for the group would obtain. The best organized cartel will yield less to the membership if the government organizes it than if it were organized privately (1976, p. 217).

This suggests that what the capture literatures treats as an ad hoc detail, the admission of outsiders into the industrial councils, is in fact an integral part of the regulatory process. Electing to seek protection via governmental regulation is an open invitation on the part of the industry seeking regulation to invite other interests into the decision-making process.

In conclusion, Peltzman's conceptualization of the "regulator" applies to executive agencies. However, it also seems to fit the role of the legislator quite well. Determining how the legislator generates a voting majority remains somewhat of a question in Peltzman's analysis; however, it is central to the understanding of the role of interest groups.

In an article that was published prior to the Peltzman elaboration on Stigler's theory of regulation, Landes and Posner offered some important insights into the roles of the legislature and the judiciary in the political process. Their article is entitled "The Independent Judiciary in an Interest Group Perspective" (1975). The authors support the conceptualization of the legislature as a market setting,

> In short, legislation is "sold" by the legislature and "bought" by the beneficiaries of the legislation .... The price that the winning group bids is determined both by the value of the legislative protection to the group members and the group's ability to overcome the free rider problems that plague coalitions (1975, p. 877).

Having accepted the market nature of the legislative process, the authors go on to argue why interest group politics display such stability in the American political context. The authors state that the stability is provided by the procedural rules of the legislature and by the existence of an independent judiciary (1975, p. 878). The procedural rules that they refer to relate to the difficulty in passing legislation. No interest group, no matter what its strength, is able to force a legislature to update a particular piece of legislation on an annual basis. The presence of an independent judiciary, on the other hand, will generally assure that the original understandings between the legislature and the various interest groups on a piece of legislation will be enforced. Obviously this is not always the case, but it is much more likely to occur if the judiciary is independently appointed and run.

There are two instances in which the authors are not persuasive in their arguments. The first occurs in their specification of the formal model and concerns the definition they give to the X-axis, labeled the legislators' costs, which they say includes costs of drafting legislation and other opportunity costs. The authors seem to have ignored the costs of brokering, i.e., the time and effort required of a legislator to put together a winning coalition of interest groups and fellow legislators, not an inconsequential cost in the legislative process. The other problem that is not easily explained is why the legislature would struggle to produce a piece of legislation that has long-term consequences. Though the authors' argument of the extremely high cost of producing new pieces of legislation every year is indeed true, it does not explain why the individual legislator whose primary goal is reelection every two or four years would seek to lock future legislatures into a particular set of agreements. However, the authors do present ample evidence to support their concluding statement that says, "In our view, the courts should not enforce the moral law or ideals of neutrality, justice or fairness; they enforce the 'deals' made by effective interest groups with earlier legislatures" (1975, p. 894).

The final book to be reviewed in this section is entitled *Politicians, Legislation and the Economy* by McCormick and Tollison (1981). The authors' primary interest in their analysis of the legislative process is the role of the political representative in brokering transfers among the various groups in society (1981, p. 15). The authors are interested in the nature of the information and the size of organization costs that are needed to effect a political decision from the perspective of the average voter. The individual voter faces basically two types of costs in seeking wealth transfers: he must discover the effect of an issue on his personal wealth and he must identify other individuals who are similarly situated. It is suspected that political brokers will seek issues in which winners can be easily identified while losers cannot be. The authors also point out that the bulk of organization costs are start-up costs in that "groups that have already borne these start-up costs for reasons unrelated to lobbying, will have a comparative advantage in seeking transfers and will therefore be more successful in procuring transfers as a result" (1981, p. 17). In the areas of the legislative market, organizational cost and political brokering, the authors have tested aspects of Peltzman's theoretical contribution and have found them useful. The authors conclude that this approach to the analysis of the legislative process does not lead to a romantic but untestable theory, but rather "toward a hard edged theory of government that can be subjected to rigorous empirical testing" (1981, p. 128).

In conclusion, it is clear that since the early 1970s, much progress has been made in the discipline of economics in the interest group theory of government. Much work has been done, and with encouraging empirical results, that indicates that indeed the legislative political process can be interpreted as a "market" setting in which legislators are able to offer legislative benefits to those groups who are organized and who in turn can offer the legislator political remuneration. This is obviously an important contribution to the economics literature and will be a key component of our analysis of state legislative voting behavior.

Determinants of Legislative Decision Making

In addition to the theoretical work reported in the previous two sections, economists have undertaken a number of studies that try to isolate determinants of legislative preferences on various pieces of legislation. The two studies reported here are typical of the approach used. In the first study, Silberman and Durden explore what causes legislators in Congress to favor or oppose minimum wage legislation (1976). In the second study, Kau and Rubin attempt to disentangle the concepts of self-interest, ideology and logrolling in an examination of congressional roll call voting (1979). The results of the minimum wage study will be examined first.

Silberman and Durden in their article entitled "Determining Legislative Preferences on the Minimum Wage: An Economic Approach," adopt the fundamental assumption "... that the political man, like the economic man, is a utility maximizer.

That is, political man responds in a predictable way to variations in total costs and benefits" (1976, p. 318). The stated objective of the Silberman and Durden paper is to test statistically this type of model of legislative decision making. The authors put forward the concept of political support effort. They define political support effort in the following manner: "Since the utility maximizing voter-consumer cannot select political goods directly, he demands an intermediate product which is denoted by political support effort" (1976, p. 318). Representatives can increase their utility by supplying political support effort in response to voter-consumer demands. The authors allowed for the possibility that a representative who provides political support effort in response to one group's demands might simultaneously be acting against the wishes of other groups. The authors therefore state that the legislature can expect to incur both utility gain and utility loss from the provision of a given level and category of political support effort.

In order to examine who is deriving political support effort on minimum wage legislation, the authors examined the following independent variables: the influence of labor unions as measured by the total campaign contributions of organized labor received by the winning candidate in the 1972 congressional election; regional variation, as measured by whether the representative's district was in the south; small business interests, as measured by the total campaign contributions from small business organizations received by the winning candidate in the 1972 congressional election; the number of low-wage workers, as measured by the percentage of families and unrelated individuals earning less than $4,000; and number of teenage workers, as measured by percentage of the total population that is 16 to 21 years of age. The authors conclude that the results of their probit analysis were consistent with their theoretical expectations. "Unions, small business, and region were the most important, while low wage and teenage workers also appeared to influence the roll call voting patterns as expected" (1976, p. 327). In addition, the results with respect to union and small business contributions provide the expected statistical evidence regarding the influence of campaign contributions on the actions of legislators.

Kau and Rubin in their article entitled "Self Interest, Ideology, and Logrolling in Congressional Voting," have undertaken the difficult process of trying to separate these three factors which are often thought to determine legislative voting. The authors detail the theoretical underpinnings of self-interest and logrolling and then offer an approximation of the theoretical importance of ideology. To operationalize each of these theories, the authors attempt to select appropriate indicators. The indicator that is especially troublesome is the one constructed for ideology. The authors use a rather unique approach to define the indicator. Rather than allowing their ideology indicator to be correlated with other independent variables, the authors remove from the ideology indicator all common statistical variation. This approach attributes all the common variation to the other independent variables, overestimating their explanatory power in the equation and underestimating the contribution of ideology.

The results indicate that there indeed is a liberal coalition in Congress which is consistent in its makeup. There is also evidence that a conservative coalition exists; however, the existence of its voting bloc is much less consistent across votes. The results also indicate that ideology is an important determinant of legislative voting. It is concluded that it is very difficult to separate out the ideological component of a coalition from the membership in a general logrolling coalition. The authors state that although they started the study firm in the belief that economic self-interest would guide the majority of voting congressmen, they came to the conclusion that it is difficult "... to continue to argue that ideology is not a significant factor explaining voting behavior" (1979, p. 384).

The thrust of these two studies has been to encourage the use of standard statistical techniques in the analysis of individual votes on various pieces of legislation. Though these studies did not contribute greatly to the theoretical understanding of legislative voting behavior, they were able to give a number of insights into the influence of particular types of variables in the legislative decision-making process.

Political Science Theories Concerning Legislative Voting Behavior

Theories of Representation

Ever since modern democratic forms of government began to emerge during the 1700s, political observers have debated the question of representation. Specifically, their questions focused on what was the proper role of the member of parliament or the legislator. In the sections that follow, perspectives on representation from Edmund Burke through recent political scientists will be reviewed. The public interest-statesman theory of representation will be considered first.

Most early thought on the role of elected representatives is derived from the writings of Edmund Burke. The legislator, according to Burke, can either employ his own good judgment as to what best serves the "public good" or abandon the statesmanship role for the role of delegate instructed by his or her constituents.

The first of these Burkean alternatives has been referred to as the public interest-statesman model of legislative behavior. The inherent attractiveness of the model is both in its simplicity and in its propagation of the belief that many elected representatives do try to do what is right for their state as a whole. The two major problems with the model are the following: (1) being able to determine what the public interest is and (2) determining whether a given piece of legislation will truly further that interest. Overcoming either of these difficult information problems is highly unlikely. However, even if they were overcome, the public interest-statesman theory tells us little about how most representatives make up their minds on the various issues before them (see Matthews and Stimson, 1970, pp. 18-19).

At the other end of Edmund Burke's continuum of representation lies the instructed delegate model. According to this model of representation, the legislative decision maker seeks knowledge of what policy alternatives his or her constituents prefer and proceeds to act upon the pieces of legislation in order to accomplish the wishes of the constituents. It would seem that the legislator is relieved of all responsibility for his/her choice, voting only as the constituents demand. Once again, however, there are impediments to any legislator ever completely implementing the instructed delegate model. The gathering of information necessary to determine what the legislator's constituents really want is a formidable task. Using that information to determine how one should vote on a particular piece of legislation would also require accurate estimates of the impact of the legislation. However, the ultimate problem with the model is the burden that it places upon the legislator to estimate impact of the vote on a particular piece of legislation in order to implement a particular policy alternative. Matthews and Stimson (1970, p. 20) conclude that "most of the time on most issues, then, the instructed delegate is just as impossible a model of decision making as the Burkean statesman."

Miller and Stokes (1963) and Achen (1978) have pursued the topic of representation in ways that have shed some additional light on the discussion of the public interest-statesman model and the instructed delegate model. The Miller and Stokes results are reviewed first.

Miller and Stokes in conjunction with the Survey Research Center at the University of Michigan studied the similarities and differences between constituency opinions and the behavior of congressmen after the congressional elections of 1958. With information collected from surveys of both a sample of constituents and the elected representatives in 116 congressional districts and the voting record of these representatives in the 84th Congress, Miller and Stokes set out to test which of three models of representation, the instructed delegate model, the responsible party model (a model which postulates that legislators vote according to their political party affiliation) and the statesman model, was used most frequently. They chose three issue areas in which to test their models. The first was the area of civil rights legislation. The second was the area of social welfare policy. And the third was in the area of international relations or foreign involvement. The major conclusion of Miller and Stokes was that "no single tradition of representation fully accords with the realities of American legislative politics" (1963, p. 56). From their perspective the instructed delegate model seemed to be used by representatives in making decisions on civil rights legislation. The responsible party model was used in order to determine votes on social welfare policy. Finally, they felt that the area of foreign involvement was most closely related to the Burkean statesman model (Miller and Stokes, 1963, p. 56).

Achen in his article, "Measuring Representation," tries to expand the instructed delegate model of Burke into a more powerful theory of representation. Central to this transformation is the development of three new measures of representation. The first measure is labeled ideological proximity and quantifies the degree of overlap between the legislator's ideology and that of his/her constituents. The second is a measure of ideological centrism or "how far" are the representative's opinions from the opinions of the median or average constituent in his/her district. Achen's third measure of representation is a measure of responsiveness. The measure asks the question, "As the opinions of the constituency become more conservative, do the opinions of the corresponding legislators also grow more conservative?" The measure is best described as the slope of the line relating average constituency opinion with the opinions of the corresponding legislator across legislative districts.

Achen operationalized these three measures of representation and applied them to the Miller and Stokes data. Achen's results revised the Miller-Stokes findings in two important respects. First, that according to two of three of Achen's measures, losers were more representative of their respective districts than were winners. Second, unlike the Miller-Stokes finding, civil rights opinions were not any better represented using the three new measures than were the other issue dimensions.

Cue-taking Theory

After reviewing the public interest-statesman model and the instructed delegate model (and even a third, the ideologist's model), Matthews and Stimson "reject all three ... as plausible models of how the average congressman makes up his mind on ordinary roll call votes" (1970, p. 21). They state that all three models suffer from the same basic flaw.

> They overestimate grossly the amount of information the congressman can have at his disposal and his ability to process and evaluate this information before voting. Congressmen must cast their votes on the basis of very little information; a realistic model of congressional decision

> making must be built on this inescapable foundation (1970, p. 21).

As a consequence of the inappropriateness of the previous models, Matthews and Stimson turn to a cue-taking model of legislator roll call voting. They describe the model in the following manner:

> When the member is confronted with the necessity of casting a roll call vote on a complex issue about which he knows very little, he searches for cues provided by trusted colleagues who, because of their formal position in the legislature or policy specialization, have more information than he does and with whom he would probably agree if he had the time and the information to make an independent decision (1970, p. 22).

The cue-taking model, therefore, "makes it possible for the ordinary congressman both to vote in a reasonably rational fashion and to do so on the basis of exceedingly little information" (1970, p. 23). In order to validate their hypothesis, Matthews and Stimson studied the frequency with which individual congressmen's votes were associated with positions of their highest rated cue givers and found that over 80 percent of the congressmen in 1961 agreed with their most important cue givers on greater than 90 percent of all roll call votes. The authors also found that the most important cue givers in order of importance were state party delegation, party leadership, governor's position, committee chairperson, ranking minority member on committee, the conservative coalition, the democratic study group, party majority and house majority. The only caution that should be raised with the results presented by the authors is the fact that the categories of cue givers listed are not necessarily independent of one another and therefore the resulting levels of agreement may be overstated.

Herb Asher in his study entitled, "Freshman Representatives and the Learning of Voting Cues" (1973), has pursued the cue-taking model even further (1973). His study focused on freshman representatives in the 86th Congress and tried to measure how their use of voting cues changed from the first session to the second. Asher's results indicated that the state party delegation was not as important in the giving of voting cues to freshman legislators as had been found by Matthews and Stimson. Further, Asher presented evidence that indicated that the desires of political party were less influential than the beliefs of the legislator in the decision-making calculus of freshman representatives.

In the second edition of his book, Congressmen's Voting Decisions (Kingdon, 1981), Kingdon directly addresses the question of who influences the decisions of congressional legislators. He approaches the problem in two ways. The first is through the process of interviewing various members of Congress immediately following the vote on a particular issue. The biggest problem that Kingdon faced using the interviewing procedure was not who to interview, but rather the selection of votes to study. Kingdon acknowledged that subjective choices of what to study had to be made and that "these were not necessarily the votes which turned out to be won or lost by close margins, nor were they all of uniformly high importance or salience. But they were among the 'big' votes of the session" (Kingdon, 1981, p. 16).

In the interviews themselves, Kingdon used several techniques to elicit from the member of Congress which actors were important in his/her voting decision.

> One way to judge whether a given actor is important in a congressman's decision is to notice whether the congressman mentioned that actor spontaneously, without any prompting from an interviewer's question (Kingdon, 1981, p. 17).

The top groups that were spontaneously mentioned in the interviews were in order of importance: fellow congressmen at 40 percent, the constituency at 37 percent, interest groups at 31 percent and the Administration at 25 percent. Actors and other sources of information that were not spontaneously mentioned included party leadership, legislative staff and the personal reading of various sources of information. Later on in the interview, when the members of Congress were asked directly to rate the importance of the same actors from a list, only two sets of actors were mentioned as being of major importance or determinative over 30 percent of the time. The two groups were fellow congressmen at 47 percent and the constituency at 38 percent. The remaining five actors and/or sources of information ranged in importance from interest groups which were mentioned 26 percent of the time to party leadership which was mentioned only 5 percent of the time (Kingdon, 1981, pp. 18-19).

Kingdon was concerned that the measurements of actor influence reported above were only subjective. He felt it important to employ another approach to arrive at an estimate of the actor's importance. The approach he used was to determine the best estimate of the actor's position on a given vote and then compare it to the congressman's actual vote. From these comparisons, Kingdon developed a set of agreement scores that indicate the probability that a congressman would vote with the position of a given actor. The conditional probabilities of agreement between an actor's position and the congressman's vote were quite high for fellow congressmen at .96, legislative staff at .89 and the constituency at .76. Using a correlation coefficient as the measure of agreement, the same three actors were again determined to be most influential in the vote of the member. Kingdon then used a multivariate approach to determine the relative influence of each actor controlling for the contributions of the other actors. The partial correlation coefficients revealed the importance of the following actors: fellow congressmen had a partial correlation coefficient at .71, the constituency had a coefficient of .35 and the legislative staff had a partial correlation coefficient of .19 (Kingdon, 1981, p. 20). From these results it is evident that fellow congressmen and the constituency of a member's district are the important contributors to decision-making processes of the legislator.

In their book, Patterns of Decision Making in State Legislatures (1977), Uslaner and Weber focus on decision-making sources within the state legislative system, particularly focusing on political parties and other cue givers. The authors feel that the key difference between the works of Kingdon and Matthews and Stimson lies in the treatment of the way legislators receive cues. The authors have interpreted Kingdon's work as seeking to determine the impact of cues on roll call vote decisions. In contrast, they feel that Matthews and Stimson are not concerned with behavior on specific pieces of legislation but rather they pose a much broader question that focuses on who the legislator would consult if s/he had insufficient information. In comparing their study with the previous two, Uslaner and Weber feel that their analysis of cue taking is "much more similar to that of Matthews and Stimson than to that of Kingdon" (Uslaner and Weber, 1977, p. 23).

However, Uslaner and Weber do go beyond the source-of-cues question to ask their state legislative respondents where they thought the significant decisions were being made in their state legislature. Uslaner and Weber report the following sources of cues in state legislatures. Cue givers, ranked in order of importance, include the following: personal friends in the legislature, legislative specialists, interest groups, chairpersons or ranking committee members, legislators of the same party from the same or adjacent districts, legislative party leaders, and administrators or specialists in a given policy area. Uslaner and Weber investigated the source of party cues by controlling for district locality, district competitiveness, a general party orientation scale and a legislative party orientation scale. Given the rather well-defined orientation toward the party system that they found among their respondents, Uslaner and Weber were better able to predict cue-seeking behavior than perceptions of how power was distributed among party leaders.

In conclusion, the arguments in favor of some type of legislative cue-taking behavior are persuasive both from a theoretical perspective (as described by Matthews and Stimson) and from an empirical perspective (as described by Kingdon and Uslaner and Weber). Legislators do rely on other legislators for information concerning how to vote on particular issues. The unresolved questions in cue-taking theory are from whom do the cue givers obtain the information that enables them to make their decision, the extent to which the cue giver is but one of many sources of information on a particular vote and what priority is given to the cue received vis-a-vis other sources of information.

Interest Group Theory

During the past three decades, there has been geometric growth in the number of political science scholars who use the interest group as the cornerstone of their inquiry into the political process. While a precise definition of "interest group" theory is difficult to articulate, the origins of this movement are much easier to trace. One of the first books to describe the behavior of interest groups in the political process was Arthur Bentley's The Process of Government, published in 1908. Though the book was the first to give the modern interpretation of the role of interest groups in the political setting, it was only after World War II that political scientists began to formulate and use a theory of interest group behavior to analyze the political process. One of the pioneering works of the post-World War II era that attempted to pull together the various discussions of interest groups in order to lay the groundwork for an interest group theory was David Truman's The Governmental Process (second edition, 1971).

Truman's work, first published in 1951, had its roots in the tradition of social psychology. Truman hypothesized that three propositions governed political interest groups. First, there is a fundamental aspect of human nature that encourages people to join with others to form groups. Second, that it should not be surprising that once these groups are formed, these groups may function not only in the social and recreational areas, but in the political arena as well. Finally, the increasing complexity of modern American society, the rapidity with which changes have occurred and the frequency of social disturbances have all contributed to making the association the most typical sort of political interest group. Truman pointed out a number of additional considerations. First, that it is quite possible that a given individual would belong to several different interest groups. Second, that government should not be viewed as only the referee among competing interest groups, but also as a participant in the interest group process. And third, that the cohesion of a particular interest group is largely determined by the group's strategic position among other groups, the characteristics of the overlapping or cross-group attachments of the members and the skills of the leadership of the group (1971, p. 210).

Another consideration that Truman emphasizes concerning American politics "is that it involves a multiplicity . . . of points of access.to governmental decisions" (1971, p. 519). What ensures this access, Truman contends, is the unwritten but uniformly recognized "rules of the game" which have allowed all types of interest groups to become involved in government. The growth of concern with interest groups in the U.S. is well summarized by Truman in his introduction to the second edition of The Governmental Process. "The interest group focus of the governmental process has in the intervening years become a major emphasis, perhaps a predominant one in political science, especially as practiced in the United States" (1971, p. xx).

On the theoretical level, perhaps the most suggestive contribution to the furthering of the study of interest groups has been made by Mancur Olson, Jr. in his book, The Logic of Collective Action (1965). The first of Olson's arguments is that a large number of individuals, even though they share a common interest, will not if they are acting rationally, come together as a lobbying organization. Since the product of doing so would be to further a collective good, there would be no way to ensure that everyone who is a member of the organization would receive the good and all those not joining the organization be denied the good (the free rider problem). Olson further suggested that it is possible for groups to be characterized by low levels of rationality in a technical economic sense. In these cases economics is a less satisfactory source of theory than social psychology.

On the basis of his analysis, Olson develops a taxonomy of four types of groups to which may be added a fifth type composed of all groups characterized by a low degree of rationality. First is the privilege group, the one in which each or at least one of the members of the group has an incentive to see that the collective good is provided even if that person must bear the whole cost of providing that good. The second is the intermediate group in which no single member gets a share of the benefit sufficient to give him/her an incentive to provide the entire good himself, nor in which there are so many members such that any set of members will notice the lack of help from another member of the group in their attempt to provide the collective good. The third type of group is labeled "latent." This group contains a large number of persons or members but is not organized and therefore if one member does not help provide the collective good, no other member would be significantly affected and therefore no other member has any reason to react. The fourth type of group is the mobilized latent group which comes into being through the use of selective incentives on the part of the group organizers. These incentives can be handled so as to penalize or deny benefits to those who do not participate in the activities of the group. A major contribution of the Olson study was to indicate the need to examine cost factors involved in organizing and maintaining the cohesion of the given group. Another contribution was to distinguish between the concepts of the public good and the collective good and to argue that the distinguishing characteristic of the group that seeks each of these goods is size.

An excellent example of how interest group theory has evolved in the context of legislative voting is provided by Miner and Chalice in their article, "Tax Reform and Legislative Behavior" (1978). The authors consider the likelihood of various groups of taxpayers pushing tax reform packages through the legislature.

The formation of their model is based both upon the likelihood of groups forming to pass the legislation and an estimate of the probability that each group will succeed in passing such legislation. These two points are drawn directly from the interest group traditions of Truman and Olson, the first concerning who will join a group, the second indicating that size of the group is a major component of the effectiveness of the group. The authors have two pieces of advice for those seeking tax reform. First,

> If one is seeking the redistribution of tax burdens, one should not seek too much. In our context "too much" would be that tax reduction which when distributed across those to bear the resultant tax increase, produces individual increases which are significant and noticeable -- noticeable to the point of spurring some to action, and especially to the point of organizing in concerted opposition (1978, p. 67).

Second, "it seems that tax changes can be made only for relatively small groups, simply because the greater the number whose burden would be lightened, the less likely their representatives will be able to respond" (1978, p. 67).

In conclusion, the role of interest groups in the political process has been under close study during the past three and a half decades. The importance of tracking the activities of such groups has never been questioned; however, the problem of identifying the active interest groups and measuring their impacts on a particular piece of legislation as it makes its way through the legislative arena are much more difficult tasks.

Other Studies of State Legislative Decision Making

In this section, a closer look will be taken at a series of studies that have focused directly on state legislatures. These studies have employed both case study methodologies and quantitative multivariate approaches to analyze the workings of state legislatures. Some of the work is focused on the passage of a particular type of legislation. Other studies have been much more general in their approach to acquiring a fuller understanding of state legislative behavior. The review of these studies gives an appreciation of the complexity of studying and comparing American state legislatures.

One of the earliest articles published on the effect of constituency influences on party cohesion was conducted by Duncan MacRae, Jr. entitled, "The Relationship Between Roll Call Votes and Constituencies in the Massachusetts House of Representatives" (1952). Using roll call votes on legislation which appeared to reflect socioeconomic differences, MacRae found that legislators representing districts which were typical of those that generally elected members of the same party, displayed greater party loyalty than legislators elected by districts atypical of their party. In addition, MacRae found that representatives whose margins of victory in the previous election were narrow, tended to cross party lines more often than representatives who were elected by wide margins. In other words, representatives from safe districts were able to show greater party loyalty than those who were elected from atypical districts or who were victorious by only narrow margins.

In 1961, Thomas Dye in an article entitled "A Comparison of Constituency Influences in the Upper and Lower Chambers of a State Legislature," tried to uncover more evidence concerning the role of legislators representing their constituencies' interests. The results are based on an examination of the 1957 session of the Pennsylvania legislature. Dye differentiated state legislative districts in Pennsylvania using two socioeconomic variables, a rural-urban indicator and a measure of family income. He found that Republicans predominate in the urban high-income, rural high-income and rural low-income areas. Democrats, on the other hand, control only the urban low-income category of legislative districts. These findings held for both House and Senate districts. He then used these classifications to examine party cohesion in the House of Representatives. He found that "as a constituency's income rises the propensity of its Democratic legislators to cross party lines increases while the tendency of its Republican legislators to violate party discipline decreases" (1961, p. 478). In addition, he found that "as the constituencies become more rural in character, their Democratic representatives prove a greater threat to party unity while the Republican representatives constitute less of a threat to party cohesion" (1961, p. 478). When he examined the relationship between the constituency characteristics and the voting behavior of the senators in the Pennsylvania legislature, the relationships found in the Pennsylvania House were conspicuously absent. Dye concludes that "while constituency characteristics had no discernible effect on the decision of senators to cohere to a party program, it was nonetheless evident in the study that both parties displayed greater cohesion in the upper chamber" (1961, p. 480).

In 1964, Masters, Salisbury and Eliot authored State Politics and the Public Schools, one of the first books to portray public education as a central part of the state political arena. Using a case study approach, the authors examined state political systems and their relationships to the public schools in the states of Missouri, Illinois and Michigan. The authors put forth several conclusions that resulted from their comparative case study. First and foremost was that education was part of the political system and that education competes for scarce resources just like other services provided by state government. Second, they concluded that stable decision-making power structures existed in each of the three states they examined (1964, p. 262). However, what makes them work and who are the influential actors influencing them varied significantly in each of the three states. Third, that although the politics of public schools is a central part of the three state political systems, relatively few public school policy proposals originate with the general public or are formed in response to public protest (1964, p. 265). From the perspective of the public official/legislator, the authors conclude that efforts in behalf of education offer few of the traditional prizes that are available in the political setting. In addition, the authors have observed that role specialization, especially within the legislative branch, is a common aspect of state politics as it relates to education (1964, pp. 275-276).

From the perspective of the education interest groups, the authors observed three common characteristics. First, that interest groups enjoy relatively easy access to education decision makers. Second, that interest groups desire to make education decisions in as routine a manner as possible. Third, that interest group's direct participation in the political process forces them to compromise in order to achieve consensus, thus enabling the resulting decisions to appear much less politically motivated than they actually were (1964, pp. 271-275).

Moving from the case studies and individual state quantitative analysis, Jacob and Vines in 1971 published their book, Politics in the American States, which analyzed state politics from a more comparative politics framework. The book is a series of edited contributions on the participation in state politics, the state policy-making arenas and the major state policy areas. The variations in state politics are illustrated by the following aspects of state political systems. The chapter on state political parties gives a good general description of the activities and goals of the state parties; however, the meaning of political party varies considerably from one state to another, ranging from the 6 southern one-party Democratic states to the 27 competitive two-party states. As would be expected, the chapter on interest groups indicated that the significance of interest groups varies greatly depending upon the political and social structure of the state. The power of interest groups also varies from situation to situation, i.e. from topic to topic or on the same topic over time. The general conclusion is that interest groups could be described as pluralistic rather than monolithic centers of influence. In the area of education and welfare policies, state efforts to fund these programs were closely related to levels of interparty competition, turnout and affluence of the voters within the state. The most politically vigorous and well-off states are the most likely to support programs for uplifting the population through schools and assistance to the poor. However, this generalization applies only to cross-state comparisons rather than to distribution of benefits within states. Finally, one of the most telling comments in the entire book was in Jack Walker's chapter on innovation and state politics. He contends that innovation in state politics has traditionally been limited to taking policy cues from other states, especially those states that were viewed as being similar to one's own state.

Another important study is Zeigler and Johnson's *The Politics of Education in the States* (1972). This study examines two important questions in the politics of education at the state level. The first asks, why do states differ from one another in their educational budgetary decisions? The second tries to tie education policy outcomes to theoretically important factors, i.e. income, political party and urbanization, over time. The first question grew out of a concern that a body of literature was evolving in the area of comparative state politics that essentially said that the size and distribution of state budgets were more a function of the underlying socioeconomic characteristics of the state than of the political process in the state (Dye, 1966; Sharkansky, 1968; Hofferbert, 1966a; Hofferbert, 1966b). Zeigler and Johnson adopt a systems approach in order to determine how much influence legislators and interest groups wield in the black box of the model. However, rather than focusing primarily on total budgetary allocations, the authors feel that the most important question concerns the size of the budgetary increment. The authors examined both economic and noneconomic variables related to education, both in a static and time-series framework. They found that prior allocations were very important in the determination of many of the variables examined, especially when studying the variables over time. However, once the prior year allocation was eliminated from the over-time analysis and in the static analysis, political, social and welfare variables played a substantially more important role in the determination of their budgetary outcomes. Indeed, if the proper time-series techniques had been used to analyze the over-time variables, it is highly likely that the contribution of the prior year allocation variable would have been significantly reduced.

Zeigler and Johnson explore what they call the legislative model in the second half of their book. Their description of the legislative model involves a progression through different sets of variables to an explanation of the legislative vote. The set of variables that are furthest removed from the legislative vote is labeled aggregate variables and is defined as contextual items, i.e. percent urban population and a progressive-liberalism index for the district. The variables that make up the next closer set in the model are legislative structural variables that include membership in the lower house, percent Republican registration in a two-party district, number of opponents in a primary and number of years that the legislator has been in the legislature. The next set of variables found along the chain of the model consists of characteristics of the legislators themselves, i.e. age, educational achievement, income. The fourth set of variables, and the closest set of variables to the actual votes of the legislator, is the attitudes of the legislator (Zeigler and Johnson, 1972, p. 110). The authors closely examined votes taken from the Oregon State Legislature on school issues in the 53rd General Session. The authors examined four types of votes on education issues. The set of votes most closely associated with school finance were votes on education appropriations and development. The authors were able to explain 23.1 percent of the variation in legislator positions on votes concerning appropriations and development. The following independent variables were important in explaining the votes: percent of the population that is urban, party registration, number of opponents in the primary for the representative's seat and the representative's level of education attainment. The only disappointing, although not surprising result of the Zeigler and Johnson study, was that attitudes of the legislators were found not to be related in any significant fashion to their votes on education issues (1972, p. 178). The authors conclude their book in the following manner, "We assert that education will in the near future become increasingly politicized. Research on the linkages between [policy makers and the public] must be undertaken by a wider range of scholars and interested citizens" (1972, p. 193).

Alan Rosenthal in his book, Legislative Life (1981), has provided an in-depth description of the people, processes and performance of legislatures in the United States. Rosenthal found that legislative people have become more representative of their districts and are better educated, more skilled and more dedicated to their vocation than their predecessors of the past two decades. The author observed that the legislative process has changed drastically from what it had been in the past. It is now "permeable, open, individualistic, professionalized, democratic and fragmented" (1981, p. 341). In most states the legislature has evolved into an independent branch of government, sharing power with the executive. The author states that this can be readily seen by examining the new policy areas in which the legislature has acted and in the growth of concern with legislative oversight.

In examining the legislative policy-making process, Rosenthal identifies four of the most important processes used by state legislatures. Two of the four, the federal mandate and the plebiscite processes, are not of central concern in the present study. However, the assembly line and the executive-legislative approaches need to be examined further. The assembly line is the process by which minor bills "are routinely processed into policy" (1981, p. 256). On average, over 3,000 bills are introduced in state legislatures every biennium and approximately one-third of them are passed into law. The majority of these become law through the "assembly line" process (1981, pp. 256-260). The second policy-generating process was labeled executive-legislative by Rosenthal. Focusing on the legislative side, this process has developed due to the growth of policy leadership in the legislature. The growing use of legislative study commissions and other work during the time between sessions and the increase in leadership offered by the standing committees has led to the legislature becoming an equal with the governor in the policy-making process, a role that has developed only during the past decade in state legislatures.

Important Theoretical Considerations from the Literature

In this final section it is important to pull together the theoretical considerations that have been explored in the economics and political science literatures. In the above literature review, which covered more than 30 different studies from the two disciplines, there are certain trends both within each discipline and across disciplines that constitute the major theoretical bases for the study of legislative voting behavior. From our reading of the literature, there seems to be three major influences on legislators in the decision-making process. The first consists of influence of constituents on the representative's voting behavior. The second focuses on the role of interest groups in the decision calculus of legislators. The final influence on legislative decision making comes from the representative's interaction with other members of the legislature. In the sections below, the influence of these types of actors and the reasons for their importance will be summarized.

Constituents

The importance of constituents in the decision-making calculus of legislators is subject to considerable interpretation. Some studies have reported that constituency influence on the behavior of legislators is very weak (Wahlke et al., 1962; Jewell and Patterson, 1966). However, Kingdon in his study (1981) reports that in interviews with congressmen, constituents were the second most frequently mentioned set of actors that had a major impact on the representative's decision. Even though congressmen report that constituents are very important in their decision-making process, the exact nature of how representatives are influenced by constituents is not known. There are at least two different ways that constituents can exert influence on the decisions of their representatives. The first is the formation of an interest group (this group could have as few as a single member) that would lobby the legislator, convey to him or her how to vote on a particular issue. The second type of influence that constituents may have is much less direct. In this approach the representative has a "feel" for the mood of his/her district on a particular issue. This feeling can be derived in many ways, e.g., from visits home to the district, from the local media or from opinion polls conducted within the district. However, no matter what the source of information, it is not directly attributable to any particular interest within the district.

When constituents organize to influence the behavior of their representatives, the process is akin to that which governs the behavior of larger interest groups. The legislator appreciates the effort involved in getting a group of constituents together to push an opinion on a given policy question. In addition, it is possible that the legislator will weigh the position of the constituent group higher than those more permanently organized interest groups that are not directly affiliated with his or her district. However, it is likely that for the purposes of analysis, constituent interest groups and more formal interest groups will be impossible to distinguish.

There are a number of contributions in the literature that point to an independent influence of the constituency over and above whatever organized interests emerge. First evidence of the underlying political nature of the community was found in several sources including Almond and Verba's book The Civic Culture (1963), which coined the phrase "political culture." In addition, Matthews and Stimson (1970) found that the most important cue givers in Congress were other members of the state party delegation. One interpretation of this result could, of course, be that state party delegations were sending legitimate cues. However, a rival interpretation would be that there is greater similarity of political and economic culture within a state than across states, and as a consequence of similar neighborly concerns, congressmen vote with legislators who represent districts similar to their own. In any case, there are enough legitimate concerns raised in the literature to indicate that constituents can have both direct influence through the organization of constituent interest groups and indirect influence on the decision-making process of their elected representative through the transmission of their political "feelings."

Interest Groups

The fact that interest groups are a central feature of the political process in the United States cannot be questioned. The literature of both economics and political science focus heavily on the role of interest groups in that process. Both economists and political scientists agree that the key to understanding the political process in this country is to replace the majority rule belief system with an understanding of the workings of interest group politics. Many of the authors reviewed above (Truman, 1971; Stigler, 1971; McCormick and Tollison, 1981) have argued that the formation of interest groups and their role in the political process, constitutes the most effective form of political participation in the country.

The principal disagreements within the literature occur in the way that the impact of interest groups on the political process is measured. However, the differences in the methods used to gauge the impact of interest groups on the political process seem to be due more to differences in the development of an understanding of the interest group process than to major disagreements among measurement techniques. For example, in Truman's initial work (1971), his major concerns included why individuals join groups and what determined the group's position vis-a-vis other groups. Shortly thereafter, Olson (1965) argued that groups do not just spring into existence as a natural phenomenon, but rather that there were cost factors involved in organizing and maintaining the cohesion of each group. Stigler (1971) and Peltzman (1976) looked specifically at the legislative-regulatory process and formalized a number of limits to the benefits that interest groups could hope to obtain from the political process. None of the studies that focus on the importance of interest groups contradict each other though all seem to be refining the position of the authors who previously examined the subject.

Fellow Legislators

The importance of fellow legislators in the decision-making process of a given representative has also been shown to be of primary importance (Kingdon, 1981; Rosenthal, 1981). When asked who the most influential actors are in forming their decisions on a particular vote, the congressmen that Kingdon interviewed overwhelmingly responded that fellow congressmen played the most important role. There are a number of reasons why legislators would turn to their colleagues for information and guidance in making their voting decisions. Many of these reasons pertain to the office or stature held by the colleague whose guidance is sought; for example, the person with more tenure and experience in the legislative process, the legislator that understands a particular subject area better than his colleagues, leaders in the political party, or legislators from districts with similar constituencies.

The literature on cue taking has been very helpful in illustrating the interdependence of legislators. Matthews and Stimson (1970), Kingdon (1981) and Uslaner and Weber (1977) have found both at the national and state levels that their results indicate a substantial degree of cue-taking behavior among legislative colleagues. This amount of cooperation is not unlikely given the compromises already made in committees, and the knowledge, shared by all legislators, of the difficulty in pushing a bill through the legislature (Rosenthal, 1981).

In conclusion, the importance of constituents, interest groups and legislative colleagues to the legislative decision-making process has been shown. In the analysis that follows, these influences will be accorded particular attention.

II. THEORY AND EXPECTATIONS

In this chapter, the theories of legislative voting behavior examined in this study are described in detail. The major tenets of each theory are taken from the literature review provided in Chapter I. The method used to operationalize each of the theories is also described, noting which indicators are used and how they are determined. A third component in the discussion of each theory is the general expectations for the performance of the models in predicting the votes on the issues examined. The expectations presented are important tools in the evaluation of the performance of a given model. The final section of the chapter provides insight into a combined analysis of the theoretical factors undertaken for each of the votes. It presents the theoretical foundations for combining the models, and describes what can be learned from a market analysis of legislative voting behavior.

Economic Self-Interest

The essence of the economic self-interest proposition is that if the bill or amendment leads to a net gain for the district's population, then the legislator will vote for it. An extension of the theory is that if the proposal maintains the status of the district's population, when another alternative is being considered that could erode it, the legislator will vote against the latter and in favor of the former. In return, the legislator anticipates that a segment of the voters of the district will support him/her at election time.

The theoretical foundation for economic self-interest is indifference curve analysis of relative utility (satisfaction). Consider Figure 1 below. The curved lines that are convex to the right angle formed by the two axes are called indifference curves. The indifference curve is a schedule of the possible combinations of two goods, A and B, which the individual equally prefers. Any of those combinations provide an equal level of consumer satisfaction. For purposes of discussion, we will assume that A represents a composite commodity and B represents education services.

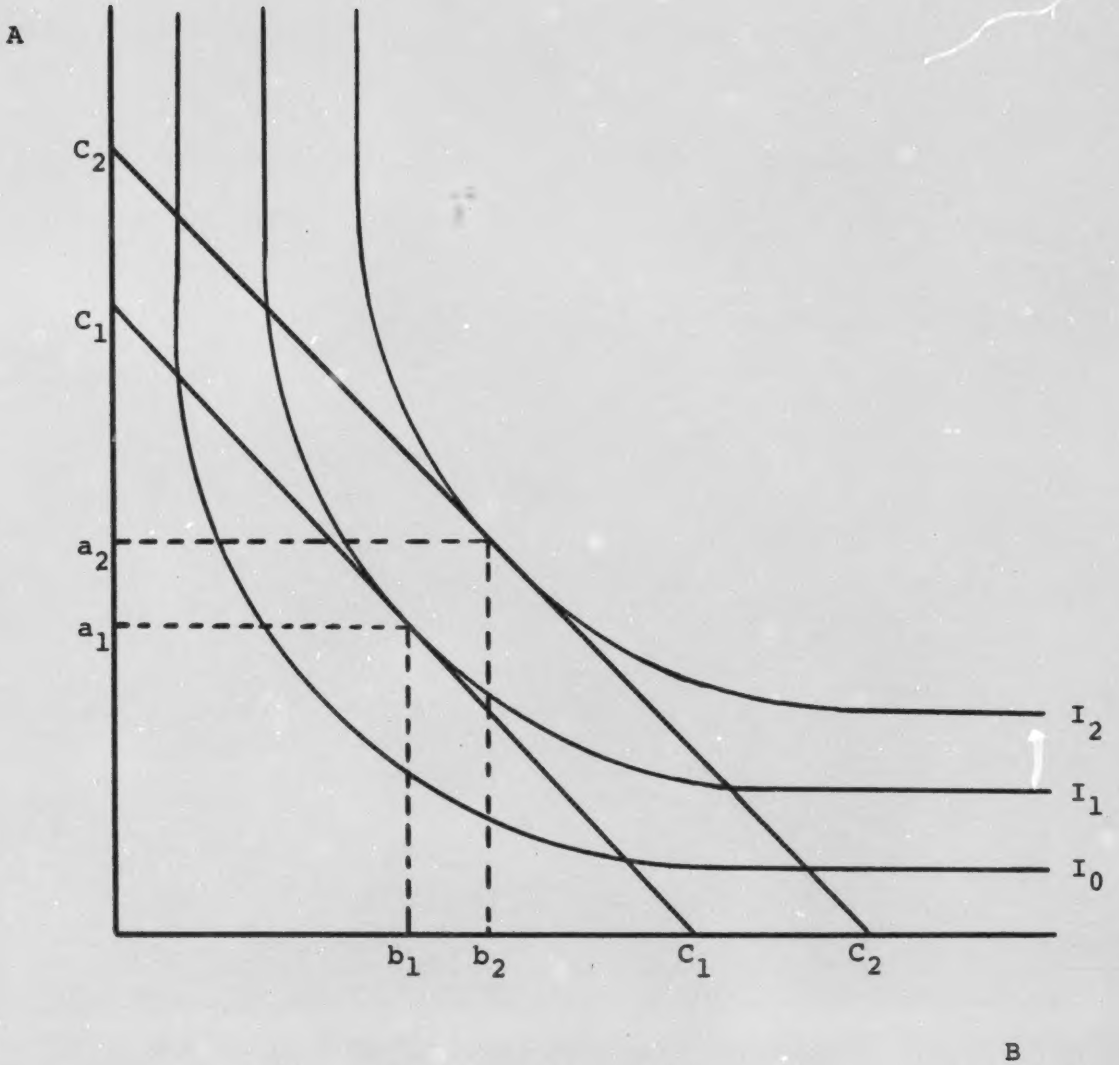
Indifference curves have several important properties. First, movements from lower to higher indifference curves represent improvements in consumer satisfaction. Second, normal goods are defined as goods which are consumed in greater quantities as income increases, i.e., as one's income increases and one moves to a higher indifference curve, greater quantities of normal goods are consumed.

The actual consumption of A and B depends on the budget constraint of the individual, which is represented by a straight line. The intercepts on the two axes represent the consumption possibilities if all income was used to purchase the particular good. For example, with the budget constraint C_1C_1, the individual would consume a_1 and b_1, the quantities at the point of tangency with I_1.

Economic self-interest is driven by trying to push out the budget constraint so that more education services can be purchased. This could occur by either increasing the voter's

FIGURE 1

Indifference Curves



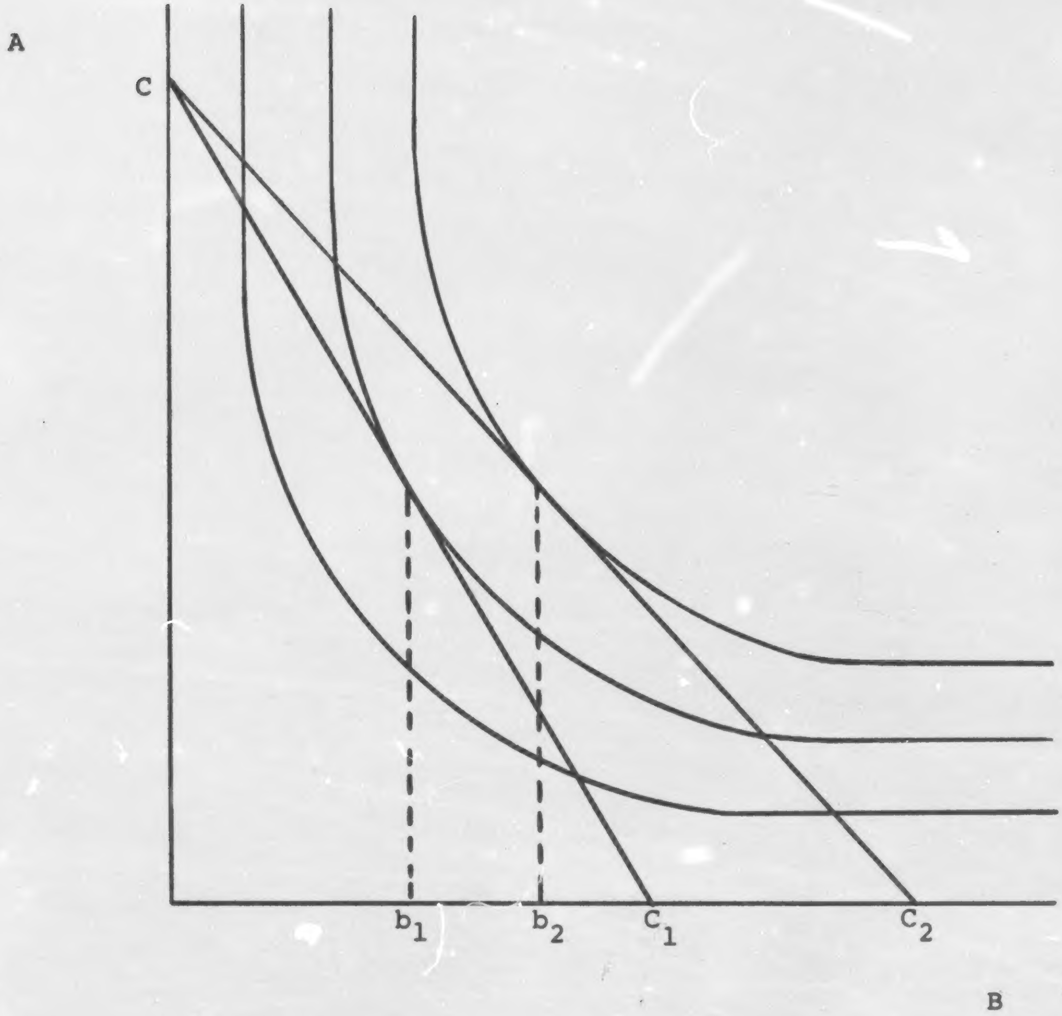
income, e.g., through altering a foundation plan, or by changing the price of education services, such as altering a district power equalizing formula. The effect of the former is to move out the budget constraint to C_2C_2 so that I_2 is reached and b_2 is the quantity of education services consumed.

The impact of a change in the price of education services is demonstrated in Figure 2 below. Altering the price of education services downward is represented by rotating the budget constraint around its intercept on the A axis such that its intercept along B moves from C_1 to C_2. The change in price permits the voter to reach a higher indifference curve, I_2, and to consume b_2 units of education services rather than b_1. The consumer has more education services than before, and has reached a higher level of satisfaction. Therefore, it is in the economic self-interest of the district's residents for the legislator to vote for a proposal that would change the price in this way. Nonerosion of status simply means that the individual is permitted to remain on the specific indifference curve instead of being forced to a lower one.

Economic self-interest was measured by different variables in Michigan, Missouri and Washington. Two variables were used in Michigan: (1) Per capita change in state aid to schools in the legislative district between 1973 and 1974; and (2) Per capita change in total general fund expenditures of schools in the legislative district between 1973 and 1974. One variable was used for Missouri: percent change in per capita in state school aid in the legislative district between 1976 and 1977. If applicable to

FIGURE 2

Illustration of the Change in Price
of Education Services on an Indifference Curve


A
C
b1
b2
C1
C2
B

the proposal being voted on, variables for fines and intangible taxes per capita were used. Also, a cost-of-education index factor was added when that issue was voted on. For the prior-year vote in Missouri (HB 350), change-in-aid data were not available and total equalized valuation per capita was substituted. Two variables were used in Washington: (1) Per capita change in state moneys to schools in the legislative district between 1977 and 1979. (2) Per capita change in total expenditures of schools in the legislative district between 1977 and 1979. For the analysis of the amendment which compensated for declining and increasing enrollment, two variables indicating the extremes of change in full-time equivalent enrollment were added.

The expectation about the direction of a legislator's vote is that s/he will vote for any measure that increases the economic status of the district's residents. That is, proposals resulting in increased aid to the district, lower tax effort or higher spending will be voted for. However, there needs to be a distinction between proposals that generate a marked increase in the gain to the district and those that benefit the district by only a very small amount. The latter changes could be called inframarginal changes. If the proposal generates only an inframarginal change in the level of utility of the district's voters, the legislator may not feel compelled to vote for the proposal because doing so is not likely to change the attitudes of the district's voters about him/her at reelection time. Also, increased aid may be part of a much larger proposal. Depending on the other contents of the package, it is expected that legislators will vote according to whether their districts receive additional aid.

The Median Voter Model

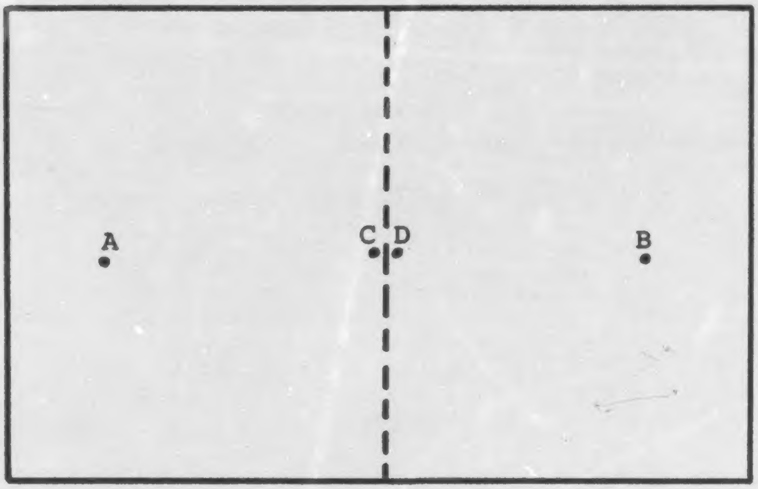
In the context of legislative voting behavior, the median voter theory implies that the legislator's vote on a proposal depends on its impact on the median voter in the district. Why should this be the case? If the proposal is desired by the median voter, at least one-half of all voters will benefit from the proposal. Therefore, assuming that voters vote for the legislator-candidate who has benefited them, at least one-half of the voters will favor the legislator-candidate on the basis of the vote of the median voter.

The theoretical underpinnings of the median voter model are derived from the theory of spatial competition. Consider the following example. The box in Figure 3 defines the spatial plane. Two individuals are planning to open stores on the spatial plane and the objective is to choose a location that will permit either store to serve the largest possible number of customers. The one cost potential customers must take into consideration is transportation, which is a direct function of distance from either store. If one store is located at A and the other is located at B, potential customers on either side of the dotted line will find it more costly to go to the store on the other side of the dotted line. Consequently, each store is noncompetitive for a large share of potential customers.

The number of customers each store could potentially serve increases as A is moved to the right and B is moved to the left.

FIGURE 3

Illustration of the
Theory of Spatial Competition



Both stores maximize their potential market by moving to adjacent locations such as C and D. Thus, the competitive solution is the location next to each other in the middle of the spatial plane.

The same solution holds for political candidates. When there are only two candidates and all eligible voters vote, the competitive solution (the no lose position) for both parties is the ideological middle. Both parties will then maintain the same ideological distance between their positions on the issue and all potential voters.

Who is the median voter and why is s/he important? The median voter usually is defined as the person/family with the median income. If other characteristics can be measured continuously along some dimension, and those characteristics are hypothesized to affect the demand for the public service, then the median voter also should possess the median of these characteristics. S/he is important because if the median voter desires that level of service, at least one-half of the voters also prefer that level. Consequently, the median voter is the swing vote.

Before addressing the assumptions necessary to estimate the median voter model, some of its drawbacks are important to note. First, the median voter model assumes that all voters vote. If blocks of voters do not participate, the median voter based on the population of eligible voters may not actually be decisive because s/he is not the median preference recorded. Second, there is the question of how the preferences of the median voter are transmitted to the legislator.

Assumptions inherent in the model include the following: (1) all legislative districts have the same shaped income distribution, although the actual values may be higher or lower; (2) the shape of the income distribution for each subgroup across legislative districts also is assumed to be identical, although actual values may be greater or lower; (3) each family's share of local taxes is a constant elasticity of its family income, i.e., there is no systematic variation in assessment of local taxes by income by group in a district; and (4) the preferred position for the median voter is unique (single peaked) and preferences are monotonic with respect to income. That is, the public service is a normal good. If these assumptions are met, the voter with the median income acts as if s/he is the median voter (Inman, 1978).

The median voter model is specified by combining the median income of families with several other characteristics of households in a community. Such characteristics, when analyzing school finance questions, would include the percent of families who are homeowners, the median number of children per family and the percent of families headed by someone 65 years of age or older. The advantage of the median voter model is that politics can be buried in assumptions concerning income distributions of various subgroups of the population. Unfortunately, the information on families required to completely test the median voter model is not available from secondary sources. As a result, only the influence of median family income on a legislator's vote will be examined. The model tested is labeled the median income model. The same variable is used in Michigan, Missouri and

Washington, i.e., the "median family income" based on 1969 census data.

The expectations arising from the median income model as applied to legislative voting behavior may depend on the directness of the issue. Specifically, if the proposed legislation is a straightforward school finance issue in which aid or spending is likely to increase with a concomitant rise in taxes, the median income may emerge as a determinant of the legislator's vote. However, if districts have vastly different characteristics and/or the legislation cannot be broken into a straightforward spending and tax issue, the median income may not influence the swing vote.

Interest Groups

As was pointed out in the previous chapter, interest groups are a central feature of the political process in the United States. The growth of the pluralistic political process in the American states has increased dramatically with the proliferation of individual interests. Groups of citizens with common interests band together on a particular issue to influence the policy decisions of public officials. These different groups are found in various stages of organizational development. Some of them have banded together in response to a particular issue at a particular point in time. These groups are likely to remain active participants on the political stage for only a very short period of time. At the other end of the spectrum, some groups have been organized for several years and are likely to remain active in the political process for years to come. Though the ones that have remained active the longest are most likely to have a more lasting impact on public policy than their transitory counterparts, the main goal of all such groups is to transmit their opinions on a variety of legislative proposals to their representatives. There are obviously many forms of communication and a distinct "pecking order" assigned by legislators to rank the importance of the various communications. However, it follows that in addition to the type of communication, a legislator's perception of the importance of a given communication is closely tied to the political strength of the communicating group in his/her legislative district.

Since virtually no single interest group holds a monopoly of influence in the public sector, the theory that prevails in explaining the behavior of such groups focuses on the economic benefit received by the group and the political support that the group provides to a legislator in return. A number of factors in the previous chapter were referred to as directly influencing the size of the economic benefit to the group and the level of political support provided the legislator in return. The first of these factors was the organizational costs faced by the interest group. These costs varied from group to group due to the strength of the common interests that bind the group together and the political history of the group in question. In addition to organization costs, two other factors influence the size of economic benefit given to a particular group. The first is the size of the interest group, which directly affects the amount of the per capita benefit and the intensity of the political support provided by the group. The other factor is the tendency toward political activity of group members. In politically active groups, a greater percentage of group members tend to participate in the political process, and as a consequence are able to deliver the votes of their membership and to eliminate the presence of free-riders. These three dimensions, organizational cost, size and participation, all influence the economic benefit received by the group and the political support it is able to muster for a given representative.

There are a number of interest groups that will be examined in the present study in order to attempt to identify what influence the presence of the groups in a given legislative district has on the vote of that legislator. The first of the groups upon which we will focus are the teacher organizations. In the state of Missouri, in which there are three teacher organizations, the Missouri State Teachers Association (MSTA) and the Missouri National Education Association (MNEA) were chosen as indicators of teacher influence in that state. The value that was used to indicate the influence of each of these groups was derived by obtaining the number of teachers in each county that were affiliated with the MSTA and MNEA and dividing that number by the county's population in order to yield the number of MSTA (or MNEA) members per thousand population. A similar strategy was used in the state of Washington to obtain the number of Washington Education Association members per thousand population. In the state of Michigan, on the other hand, virtually all districts are organized and the membership is divided -- two-thirds with the

Michigan Education Association and one-third with the Michigan Federation of Teachers. The measure of teacher influence adopted was the number of teachers per thousand persons in each county in the state of Michigan since individual legislative district measurements of the separate teacher organizations were not available.

Taxpayers are another group in whom there is much interest. It is felt that persons who are exerting higher property tax efforts would constitute a very important interest group, because they would either feel that their tax efforts are too high for the services being received or that they value education services far above their counterparts across the state. Equalized tax efforts were used in each of the three states to measure this important interest group. In the state of Washington, the prior years' special levy tax effort was used as a tax effort indicator because it most closely represents the local contribution to the funding of public education in Washington. Another indicator of an identifiable interest group used in the analysis was the concentration of poor children in a district. The measure used as an indicator of this group was the number of children receiving Aid to Families with Dependent Chidren (AFDC) payments per thousand population. Poor children are not necessarily found in poor school districts and therefore the indicator identifies an important and distinct interest group.

The final two indicators represented various aspects of business in the community. The first of these represented "blue collar" interests. The indicator was the percent of those employed in manufacturing occupations. It was assumed that although "blue collar" workers would not have a direct interest in the outcome on votes on state educational policy, communities with large concentrations of workers in these trades would have less interest in financially supporting local schools (a relationship confirmed by the fiscal response literature [see Stern, 1973]). The other aspect of the business community that was considered important was small business interests. The concerns of the small business community centered around tax increase issues because, from the perspective of the small business operator, such increases in taxes would diminish the disposable income available to all consumers. The indicator used to represent small business concerns was the percent of the total work force employed in wholesale and retail occupations. Tax increases especially burdensome to these small business concerns would be in the form of sales or income tax increases.

The expectations that accompany the identified interest groups generally fall into two main categories. The first is the identifiable self-interest of the group. There will be legislation and identifiable parts of legislation that will be in the direct interests of some groups to either favor or oppose. If such interests are identifiable, then it would be expected that the affected interest group would influence its legislator to vote in the direction of its identifiable interest. For example, it would be in the direct interest of the various teacher organizations to support and encourage their legislator to promote any provision that would mandate a fixed state contribution to local teacher salaries, as long as the mandate is above current spending levels. On the other hand, a second category of expectations are votes on the components of various pieces of legislation that would not be in the direct self-interest of a particular group, but that would be generally favored or opposed by such a group. An example of this situation would be the passage of a new school finance package that increased funds to schools and required an increase in taxes. If the increase in taxes were likely to come from a sales or income tax increase, then the small business indicator may be negatively related to the vote on the passage of the bill. These general types of concerns are very important in the gauging of the influence of interests that are not directly affected by education legislation.

The Constituency

Another area of concern in our examination of the factors that influence legislator voting decisions is the legislator's constituency. It was pointed out in the literature review that there is evidence of an independent influence of the constituency over and above whatever organized interest groups emerge. What we refer to here when we describe constituency influence is the characteristics of the legislative district that serve as boundaries for the legislator when s/he is considering public policy options. These boundaries serve as parameters within which the legislator can exercise his or her discretion when deciding among policy options. However, the legislator cannot support policy options outside of these parameters. Another way of describing the influence of the constituency is that it is the political "given" of the legislative district.

The underlying explanation of why constituencies differ is more a discernible fact than a political or economic theory. Over time in the United States there has occurred a complex sorting process that has moved certain types of individuals into certain areas. One of the major trends was for people to move into the metropolitan areas from the farm/rural areas, and then to relocate themselves within the metropolitan areas once there was an opportunity to do so. A second trend has been for the various ethnic and racial groups to maintain rather close-knit neighborhoods. For the most part, this activity has occurred in central cities; however, suburbs and more rural areas are not immune from the close-knit neighborhood phenomenon. There are a number of reasons why people participate in the sorting out process. One reason has been due to economic necessity in that people could not afford to move or live in other areas. A second reason would be that people were discriminated against in their search for a place to live. A final reason would be the differences in lifestyle that were preferred by those who moved. Each of these factors contributes to the definition of a constituency in a given legislative district. Tied up in these three factors are the community`s attitude toward public services, their communication network for organizing information from the outside world and their attitudes toward what role government should play in their lives. All of the above characteristics of the community constrain the positions that a legislator representing that community may take. This phenomonen, known as political culture, has been observed by many authors, the most notable being Almond and Verba (1963). It exists at both the state and local levels and can be characterized as the background noise in the political arena within which the legislator must perform.

In order to measure these aspects of constituency, the method of factor analysis was employed. In each of the three states, the following variables were submitted to factor analysis: the percent of the population that resided in an urban setting, the percent of the population that was black, the percent of land that was dedicated to farms, the per capita income of the district residents, the per capita expenditures spent on local services, the percent of the housing stock that was owner-occupied, the percent of local expenditures devoted to public education, and the ratio of teacher organization members to pupils across legislative districts. The factor analysis in the state of Missouri in the House of Representatives substituted four indicators, suburban and rural fast growth areas and suburban and rural slow growth areas, for the measure of per capita income. The most notable part of the analysis was the consistency with which two factors emerged from the analysis in each set of House districts and in the Senate in Missouri.

The two factors that were identified in each of the four settings have been labeled "desire/need for public services" and "rural/urban lifestyle." The determination of these factors and their relationship to the variables that were used to create them are presented in Table 1. For each state and each factor a rank

Table 1

FACTOR STRUCTURE OF OBLIQUELY ROTATED FACTOR MATRIX

Desire for Public Services

Washington
Explained 59.5%

Per capita local expenditure	.911
Per capita income	.816
Percent urban	.482
Percent black	.481
Percent owner occupied	-.507
Percent of land in farms	-.508
WEA members/pupil	-.648
Percent of local expenditure on education	-.956

Michigan
Explained 55.2%

Per capita local expenditure	.926
Percent black	.920
Percent urban	.761
Per capita income	.350
Teachers/pupil	-.[illegible]
Percent of land in farms	-.651
Percent owner occupied	-.680
Percent of local expenditure on education	-.881

Missouri
Explained 53.9%

Fast growth suburbs	.832
Percent black	.798
Per capita local expenditure	.744
Slow growth suburbs	.663
Percent urban	.356
Percent of land in farms	-.215
Fast growth rural	-.268
Percent of local expenditure on education	-.667
Slow growth rural	-.799
Percent owner occupied	-.833

Missouri (Senate)
Explained 56.5%

Percent black	.965
Per capita local expenditure	.919
Percent urban	.648
Per capita income	.105
NEA members/pupil	-.210
Percent of land in farms	-.450
Percent of local expenditure on education	-.881
Percent owner occupied	-.965

Rural/Urban Lifestyle

Washington
Explained 15.4%

Percent black	.934
Percent urban	.861
Per capita income	.783
Per capita local expenditure	.369
Percent of land in farms	-.363
WEA members/pupil	-.522
Percent of local expenditure on education	-.578
Percent owner occupied	-.727

Michigan
Explained 19.8%

Percent urban	.750
Per capita income	.737
Teacher/pupil	.506
Per capita local expenditure	.251
Percent of local expenditure on education	.171
Percent black	.049
Percent owner occupied	-.167
Percent of land in farms	-.273

Missouri
Explained 16.9%

Percent of land in farms	.652
Fast growth rural	.643
Percent owner occupied	.575
Percent of local expenditure on education	.566
Slow growth rural	-.050
Slow growth suburbs	-.285
Fast growth suburbs	-.376
Percent black	-.653
Per capita local expenditure	-.714
Percent urban	-.842

Missouri (Senate)
Explained 33.2%

Per capita income	.964
NEA members/pupil	.901
Percent urban	.807
Per capita local expenditure	.291
Percent black	.122
Percent owner occupied	.003
Percent of local expenditure on education	-.120
Percent of land in farms	-.694

ordering of the loading of the variables that determine the factor are presented. At the top of each list of variables is the percent of the total variation within the set of variables that is explained by the factor. As was mentioned above, the consistency of the dimensions across states and chambers is especially striking. In the desire/need for public services factor, per capita local expenditures, percent urban and percent black are consistently found to define the positive end of the dimension. On the opposite end of the dimension, percent owner-occupied and percent of local expenditures devoted to education are consistently related. The same consistency is found in the rural/urban lifestyle factor. On the positive end of the dimension, percent urban and per capita income are consistently the defining variables. Percent owner occupied, percent of local expenditures devoted to education, and percent of land in farms all determine the negative end of the rural/urban lifestyle dimension. (It should be noted that when the rural/urban lifestyle dimension was identified in the Missouri House of Representatives' districts, the factor was found to be inverted.)

Having identified the two constituency factors, it is important to clearly define what each of the dimensions represents. The desire/need for public services dimension is fairly straightforward to understand. High need, high per capita income districts that feel comfortable with the notion that government is in the business of providing services to local communities characterize the districts with high positive scores on the desire for public services dimension. Districts with high negative scores on the dimension are districts that have low per capita expenditures on local government services, have a high percentage of owner-occupied housing units and spend a large percentage of what they do spend for local services on education. The dimension is a classic melding of high need with high tastes for public services versus low need with a low preference for public services. It would be expected that the desire for public services dimension would be positively related to votes that would raise spending on local educational services and votes that target special need areas for increased state aid.

The second dimension that was identified, labeled rural/urban lifestyle, is somewhat more difficult to define. It was noted above that the dimension was delineated by percent urban at one extreme and percent of land in farms on the other. This could lead to an interpretation of the dimension as being nothing more than a surrogate for the percent urban indicator. Unfortunately, that interpretation is only somewhat consistent with the correlation between rural/urban lifestyle dimension and the percent urban indicator, with the correlation ranging from .7 to .9 in the four different settings. In looking more closely at the variables that define the dimension, it is noted that percent owner-occupied and percent of local expenditures spent on education were also important components of the definition of the dimension. As a result of these additional factors, the decision was made to include the lifestyle concept in the definition of the rural/urban dimension.

The following is expected to apply to the rural/urban lifestyle dimension: districts that score on the rural end of the dimension will tend to favor retention of the status quo in votes on changes in major education policy. However, there is sympathy in these districts for policy changes that would enhance the basic program in the public schools, and this tendency could run counter to the desire to maintain the status quo.

The Political Party and the Use of Cues

Political parties have been an institution on the political landscape of the country since shortly after the nation was founded. The modern day version of political party is a way of giving a thumbnail sketch of the political background of a person holding public office. It is best characterized as a description of the ideological orientation of the officeholder. Another way of saying this is that the political party provides the historical moorings for the state political system.

There are two traditions that contribute to the understanding of political party from a historical perspective. The first is the historical positions of the Democratic and Republican parties on the issues of revenue raising and service distribution. In most state two-party political systems, the tradition of the Democratic party has been to favor revenue raising and redistribution policies, while the Republican party has for the most part been committed to revenue maintenance or revenue shrinkage and selected distributional programs. This traditional view of the two major political parties generally holds in the states selected for study -- Michigan, Missouri and Washington -- although the strength of these traditional positions varies considerably from place to place. Another theory that complements the historical-moorings conceptualization of party is the concept of the "normal vote" put forth by Campbell, Converse, Miller and Stokes (1960). The normal vote in a given election is hypothesized as the situation when everyone votes in accordance with their political party identification. Historically the tendency for voters to follow their political party identification has been quite strong; however, in the recent past, political candidates have had a much harder time attracting voters who identify with their party.

Another thrust in the attempt to understand the influence of political party has come from Thaler and Shefrin (1981) who proposed an economic theory of self control. In relation to the political party and the state legislature, Thaler and Shefrin's approach could be summarized in the following manner. Legislators for the most part are considered to be myopic due to the tendency to act in their own self interest, i.e., political reelection, and the political party is one of the forces exerting pressure upon the legislator to consider long-term interests. A less extreme view of the situation existing between the legislator and the party would be that political party does indeed provide the ideological orientation in the legislature, though a given legislator on a given issue may have to vote in accordance with a concern other than ideological orientation. However, it is also as likely that if the legislator does not have reason to vote one way or another on a particular piece of legislation, the legislator would give his/her vote to the political party in order to strengthen its ideological stand. There are obviously a number of differences in the situations that separate the legislator who is completely myopic from the legislator who is willing to give his or her vote to the political party. There are incentives provided by the party to remain in the party fold, and there are benefits accrued by individual legislators for shedding the party label and voting according to a reelection-seeking strategy. Each individual legislator must make up his or her mind as to how they are going to play this particular aspect of the game.

Another concern that has been raised, especially in the relationship to political party, is the notion of the sending and the receiving of voting cues. One of the most pressing problems of any legislator is the sheer volume of information that must be digested in order to make reasonable decisions on public policy matters. It has been suggested by a number of sources reviewed in the preceding chapter that legislators often look toward significant others in an attempt to determine how to vote on a given proposal, thus avoiding most of the homework on the proposal. For cue-taking theory to be accomplished, there needs to be a bona fide sender of the cue and evidence that, indeed, some of the cues were received and used. Party and committee membership have been identified as important cue givers in the legislative setting, and therefore voting cues sent for each of these groups have been computed.

The measurement of these two elements, political party and cues are straightforward. The political party of the legislator was taken from the legislative blue books of each state. Cues were computed for each vote from the leadership, from the education committee and from the appropriations committee when at least 80 percent of the members of a given party in the three groups voted the same way on a particular vote. It is therefore possible for two leadership cues, two education committee cues and two appropriations committee cues to be given on each vote that is examined.

It is expected that political party will be related to all votes examined in the present study due to the ideological orientation of political parties. However, it is also expected that political party will be a critical factor in only some of the votes. Democrats, for the most part, are expected to be in favor of legislation that helps particular needs in school districts and be generally pro-education and pro-labor, especially vis-a-vis teacher organizations. Republicans, on the other hand, are expected to be mainly concerned over budget issues and yet favor general increases over revenue redistribution. Finally, it is expected that cues will be closely related to political party. This occurs for two reasons, first because it is felt that legislators are most likely to seek cues from members of their own party in leadership and committee positions, and second that cues are computed according to party identification. The cue should also give us an idea of where the center of decision making actually occurs in the legislature. On a particular vote it may be that the leadership was more helpful than the Education or Appropriations Committee, but in another vote the Appropriations Committee was viewed as being most important.

Legislator Decision Making

The purpose of this final section is to explore an alternative model that combines the individual models described above in order to predict the direction individual legislators will vote on selected school finance issues. It is felt that the individual models by themselves are too narrow since they each concentrate on only one relationship. The fundamental tenet underlying this alternative model is that a market process is at work, a process whose framework can accomodate the individual models. Therefore, legislators make tradeoffs between constituents, interest groups and the goals of the party while taking advantage of the positions they hold within the legislature.

The model developed below is, like any model, a short-hand description of a process or an event. To keep the model managable, it must be restricted to a few elements of a process or events of a particular type. As we develop a model of the market for legislative action, it is recognized that the formulation of legislation and the eventual vote on it is an iterative process. A bill is not introduced in the legislative body at 9:00 a.m. and voted on at 9:30 a.m. of the same day. Instead, a proposed bill is circulated, seeking comment and sponsors. Legislators evaluate the bill trying to determine the impact in their own legislative districts. How are different groups affected? Can coalitions be formed among competing groups in the district? What is the extent of the opposition? Will the results of the bill influence future reelection chances?

After these questions are answered, the legislator may decide to sponsor the bill, actively work for its passage or defeat, or may just ignore it until the bill comes up for a vote. If the legislator does not choose to ignore the bill, s/he may become involved in another form of coalition-building, developing agreement among legislators. This coalition-building, although not explicitely modeled here, builds on some of these same constraints. Can a legislator afford to join a coalition in favor of a bill if the redistribution involved is (a) harmful to the district overall, (b) injurious to a small but important interest group in the district or (c) either harmful or beneficial overall, but the magnitude is so small that it will not affect the behavior of the voters. Logrolling is the key feature at this stage.

Thus, what we attempt to develop here is a model of a market for legislative action, with the vote on the bill being only one element of the action. The model attempts to isolate the underlying demand for and supply of wealth redistribution and to determine which groups receive the wealth transfer. The determinants are impartial; the prices groups are willing to pay compared to the costs of supplying legislative action and coalition-building services. In the process some details will be lost and the iterative procedures will not be given their due. However, the model hopes to capture the underlying relationships and to integrate them into a flexible system.

As a starting point, it is assumed that each legislator attempts to maximize his/her political support. However, because a legislator is not held immediately accountable for legislative actions and because legislation redistributes wealth, it does not necessarily follow that the legislator will vote on a given issue so that the maximum number of electors in the district are benefited in order to maximize political support. A framework developed by Stigler (1971) and Peltzman (1976) serves as the basis for developing a model of legislator decision making that attempts to integrate both economic and political theory. In this framework, legislative action, just like other goods and services, is bought and sold in a market.

The approach developed by Stigler and Peltzman attempted to predict which group purchased legislation and therefore received a wealth transfer. Since the theory initially was developed in the context of economic regulation, it is more concerned with the demand for legislation than with its supply. The mechanism to supply wealth transfers, the regulatory agency, was already assumed to be in place. Consequently, as McCormick and Tollison have argued, the regulator-legislator "remained basically a mystery actor" (1981, p. 9). However, their conception of the legislator as a broker is not satisfactory either because it again assumes a very passive role for the legislator -- establishing the demarcation between who benefits and who is taxed. Therefore, in order to address the issue of supply and the role of the legislator, a market for legislative action is formulated and analyzed.

The Market for Legislative Action

The starting point of the analysis is the definition of a market for legislative action. For purposes of the model, assume an auction is held. Bills describing particular transfers of wealth and taxes that can be accomplished through legislative action are circulated at the auction among the constituents in the electoral district. Individuals attempt to identify others who are affected similarly by the bill in order to organize themselves into groups (or coalitions). Each group then registers its bid on the bill with the legislator.

The legislator must decide whether s/he will supply legislative services to the bill. Legislative services could take the form of sponsoring the legislation, rewriting it, assisting in building a coalition among interest groups or other activities associated with getting the bill through the legislative process. Throughout, the legislator must consider whether the activity will contribute to maximizing his/her political support.

Since this is a market, the decision of whether a bill is actually recommended for legislative action depends on the forces of supply and demand. No legislation will be recommended if the price that is offered is less than the cost of supplying services. In order to estimate the market, the factors determining the location and shape of the demand and supply schedules need to be specified.

The Demand for Legislative Action

The essence of the demand for legislative action is to predict which group or groups will be successful bidders to receive the transfer of wealth. Peltzman's formulation of demand for redistribution will be adopted. Specifically, Peltzman hypothesized that the demand price for legislation would be a function of the net per capita transfer to a group.*

He used the following relation:

$$g = (T-C(n))/n$$

where g is the per capita transfer to a group,

T is the total dollar amount of the transfer considered in the legislation,

$C(n)$ is the cost of organizing a group to demand legislation where organization costs increase with (n), but no restrictions are placed on the shape of the marginal cost curve, and

n is the number of voters in the benefiting group.

As can be calculated, (g) is larger the greater is the size of the transfer (T), the lower are the costs of organization $(C(n))$, and the smaller is the size of the group (n).

The argument that legislation only redistributes wealth is very important. As a result, a transfer of a certain amount of wealth must be matched by an equally large tax (negative transfer) on others. Legislation is a zero-sum game. Therefore, potential benefits exist for organizing to stop a tax just as there are benefits for organizing to receive a transfer. Considering Peltzman's formulation again:

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*This formulation differs slightly from Peltzman's in that he included another term, K, in the numerator, which he defined as the dollars spent by beneficiaries in campaign funds, lobbying and so on, to mitigate opposition. Including this term is another indication that Peltzman placed no minimum supply price on the regulator's time and effort.

$$h = (S - C(n))/n$$

where h is the per capita savings in taxes to a group.

S is the dollar amount of the tax considered in the legislation for the group, and

the other variables are as defined earlier. In the two-group case, S equals T, assuming there are no costs of administration.

Whereas (g), the per capita transfer to a group, may be considered the upper bound that each member would pay in order to receive a transfer, the per capita tax savings (h) is the upper bound each member would pay in order to stop the transfer (avoid the loss) being considered.

Returning to the auction, a bill is circulated and the redistributive impact of it (T or S) is calculated. Individuals similarly affected, some benefiting, others being taxed, begin to organize into groups. Consider the following:

If $C(n)_i > T_i$ or S_i, g_i or $h_i < 0$; therefore $D_{pi} = 0$

If $C(n)_i < T_i$ or S_i, g_i or $h_i > 0$; therefore $D_{pi} > 0$

where D_{pi} is the demand price for the legislation by group (i) and all subscripts refer to transfers, taxes or costs for the group (i).*

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*It should be noted that a legislative district may be composed of various groups that all benefit and none are taxed by the specific proposal. However, groups in other districts may bear a disproportionately large share of the tax. Stated differently, each legislative district is not a closed system.

The bid price per group member will not necessarily equal (g) or (h), because if it did, the net per capita benefit would drop to zero. Instead the per member price the group pays is some multiple (m) of either (g) or (h), where m is greater than 0 but less than 1. In order to generate a positive probability of support, the per capita transfer must be positive. It is assumed that the group determines the size of the net per capita transfer it expects to receive in return for supporting the legislator and sets (m) accordingly.

The demand schedule represents the prices different groups would pay either to receive or to stop the transfer; it does not indicate the quantities of legislation and prices associated with them. In this regard it differs from the conventional interpretation of the demand schedule. The group simply places a per capita bid for the legislation just as it has been proposed. These bids are then ranked and ordered such that the group bidding the highest per capita is placed first, the second highest bid is placed second, and so forth. The graphical representation of the situation is presented later.

The Supply of Legislative Action

Deriving the supply schedule of the legislator is the more difficult and interesting task in defining the market for legislative action. The supply schedule has two components, the intercept and the slope. The intercept is assumed to represent the reservation price the legislator has for supplying legislative services for a particular bill. It is the minimum compensation (support) that the legislator requires to supply his/her legislative services. It is hypothesized that the reservation price attached to a particular piece of legislation is a function of the political party membership, ideology, his/her seniority and his/her committee standing (assignment) and the legislator's estimate of minimum acceptable behavior in the issue area imposed by his/her constituency. Thus, it is in the supply curve of the legislator that bivariate relationships are brought together.

The actual supply schedule is assumed to represent the cost of forming a coalition in the district that will lead to the legislator's reelection. To a certain degree, the supply curve is driven by the demand schedule since the cost of building a coalition depends on which groups have bid prices above the reservation price for the legislation. The legislator must react to the groups making a bid in order to begin forming a coalition. The coalition formation process entails generating sufficient support and mitigating opposition. The slope of the supply curve will vary depending upon the groups that have bid on the legislation, because the cost of organizing a coalition increases as more groups are brought into it. That is, the marginal cost of bringing together organized groups is positive.

If the population is heterogeneous, the distributional effects of any bill will not be the same throughout the population. Depending on the features of the bill and the costs involved in building a coalition, support maximization may be advanced if more than one group is "benefited." Since group formation is part of the demand process, the legislator must supply services to organize the coalition. The slope of the supply curve is dependent on the costs of coalition building, which depends on the groups involved.

As indicated above, it is assumed that the actual reservation price for a particular piece of legislation varies by the legislator's political party membership, ideology, his/her seniority, his/her committee standing and expectations of certain types of behavior by his/her constituency. Consider the relationship between political parties and the reservation price. Political parties tend to be organized along ideological positions. The more consistent the proposed transfer is with the position of the party, the lower should be the reservation price, holding other things constant. The more repugnant the transfer, the higher is the reservation price. Furthermore, the legislator may have a very strict personal ideological position on the issue above and beyond that taken by the party. This also could affect the reservation price.

In addition to the status of the legislator within the legislature, another important contributor to the determination of the reservation price is the limitation placed upon the legislator by his/her district. There are a number of minimally acceptable positions on various issues imposed by the district that the legislator cannot be perceived as wavering on. The existence of these threshold positions increases the reservation price of the legislator for a given piece of legislation.

Graphical Representation of the Market

The prices bid by groups as well as the reservation price of the legislator are measured along the vertical axis in the upcoming figures. The number of groups bidding on the legislation is measured along the horizontal axis. In each figure the demand schedule and the supply schedule are in reference to the specific bill being auctioned. Thus, quantity of legislation is not being measured on the horizontal axis. Three different cases are discussed in turn.

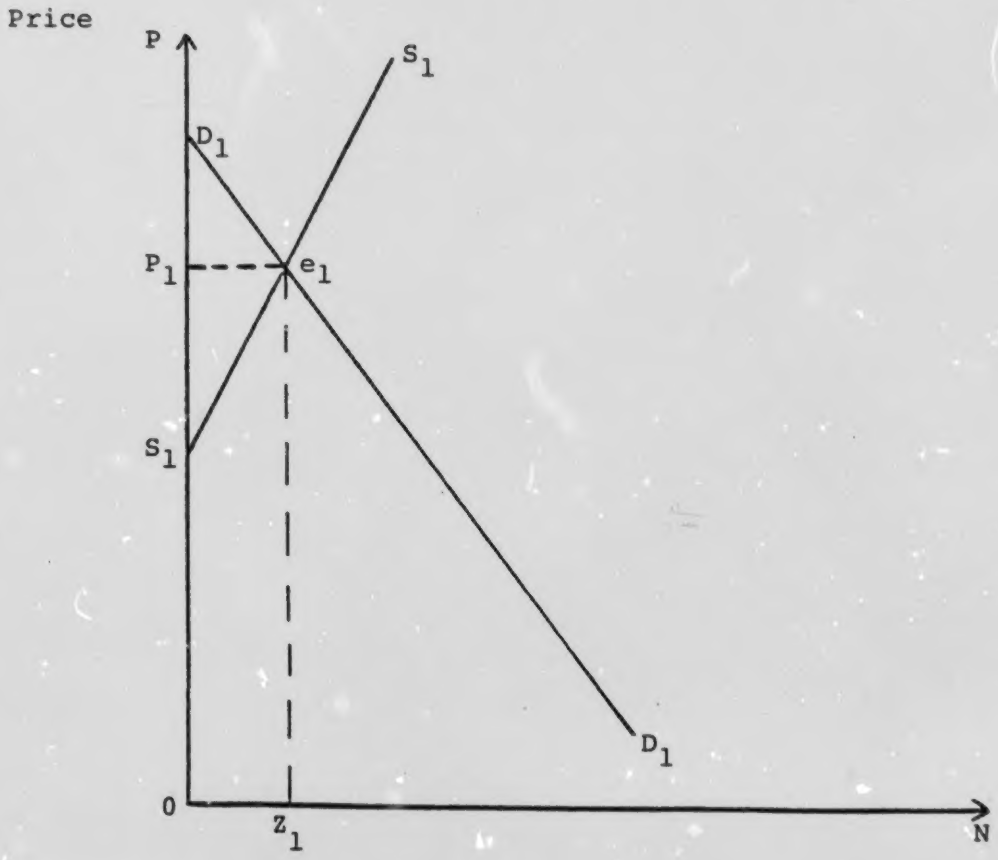
Turning now to Figure 4, the vertical axis indicates the prices bid by groups and the reservation price of the legislator and the size of the coalition (number of groups) is measured along the horizontal axis. It can be inferred from the slope of the demand curve (D_1 D_1) that the effect of this bill is uneven throughout this legislative district, and/or the organization costs of groups vary. The reservation price of the legislator, which is the point where S_1 S_1 meets the vertical axis, is relatively high although it is less than the highest price bid by any one group. Because of the slope and location, the intersection takes place at a relatively high price and with a relatively small coalition formed. The transfer to the coalition is defined by the area P_1 e_1 Z_1 and would be distributed to OZ_1. It also should be noted that the transfer is relatively small and therefore the tax per capita also is likely to be quite small.

A second case is presented in Figure 5. The slopes of the schedules are less steep indicating (1) that the population is more homogeneous or (2) that the legislation does not affect different groups in an uneven manner. Furthermore, the marginal cost of bringing additional groups into the coalition is relatively low. The intersection of D_2 D_2 and S_2 S_2 is at a

FIGURE 4

The Market for Legislative Action

Situation One

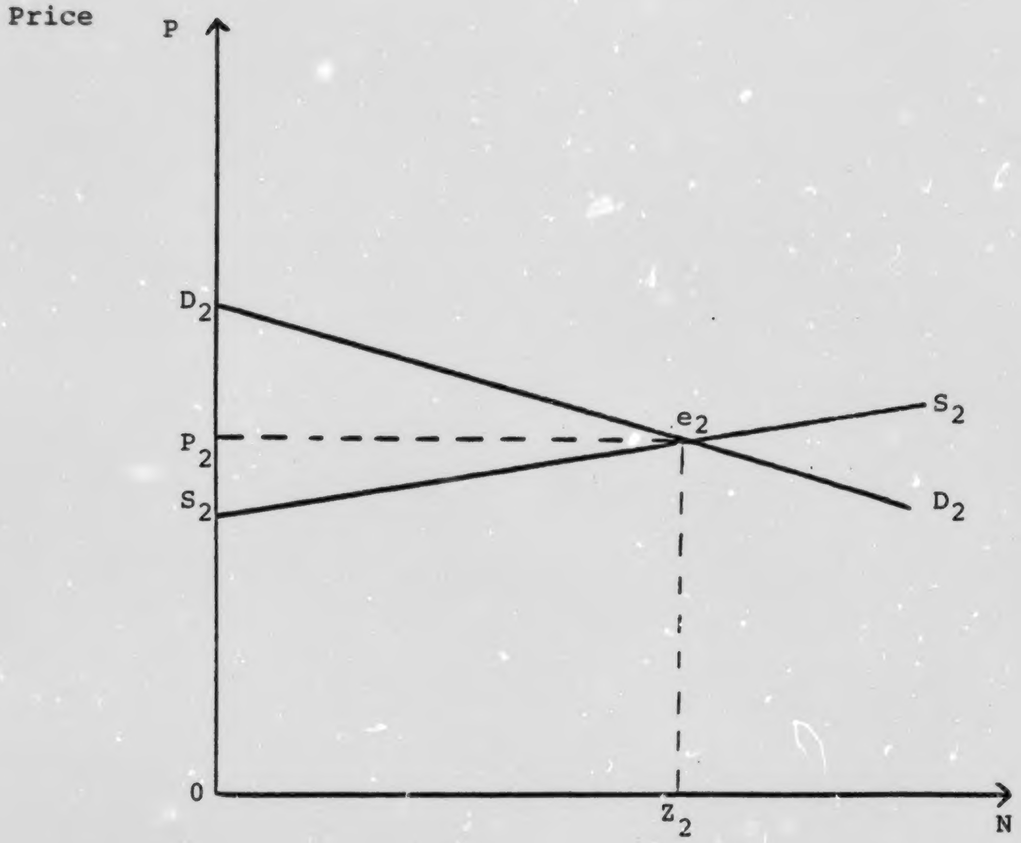


Number of Groups

FIGURE 5

The Market for Legislative Action

Situation Two



Number of Groups

relatively lower price and with a larger coalition. The size of the transfer would be P_2 e_2 Z_2 and distributed to OZ_2. Although the size of the transfer in the second instance would be larger, it would be distributed over more voters. Thus, the net per capita transfer may be smaller.

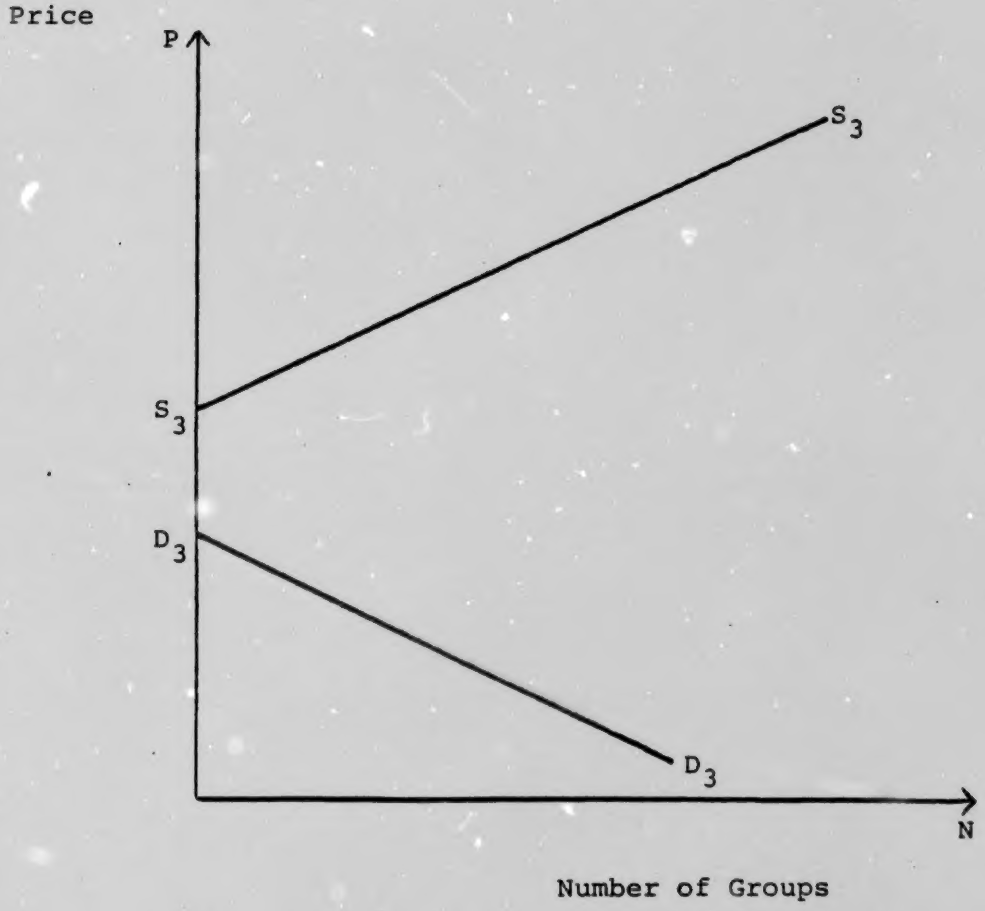
The third case, which is presented in Figure 6, depicts the case in which no legislative action results. Specifically, the highest price bid by any group D_3 D_3 is less than the reservation price of the legislator (the intersection of S_3 and the vertical axis). There is no market clearing price in this instance, so no further action is taken by the legislator.

What has been described here is the process in which a legislator selects which bill s/he will support for legislative action. Presumably, the same process is occurring in all legislative districts. The problem that has not been explored here is the relationship between the legislative action decision, the vote of the individual legislator and the actual enactment. There are several issues. First, since legislative districts are heterogeneous, each legislator will not bring the same bills to the market for enactment. This creates no problem for the empirical analysis because we are only concerned with bills that are brought to the market for enactment; some consensus among legislative districts has already been reached. For bills that are brought to the market for consideration by the full body, each legislator will not have derived the same coalition of groups. Due to the characteristics of the individual districts, the coalitions built will vary. This issue entails coalition-building

FIGURE 6

The Market for Legislative Action

Situation Three



and log rolling among legislators. Although not analyzed, it is presumed that these coalitions must recognize the constraints of the home district. Third, for legislators who participated in the market for legislative action, their vote will reflect the direction of their participation. There is a fourth issue. How is the vote to be estimated for those legislators who were not interested in supplying legislative services to the particular bill? This issue is addressed through the role of the political party and cues.

What separates the approach presented here from most other analyses of voting behavior is the concept of a market. In the usual market for a good or service, those demanders that are willing to pay a price greater than or equal to the equilibrium price receive the good or service. This entire group of demanders can be viewed as winners. In the legislative market, however, some groups may gain at the expense of others. An accommodation must be made for the possibility that both a potential winner and loser may bid prices that are greater than the "market clearing price." That is the role of the supply of legislative action. If building a coalition is possible at less than the price of those demanding legislative action, a transfer may take place.

Summary

The theoretical approach described above is an exploratory synthesis of the traditional theories of voting behavior brought together within the concept of the market. The market developed here is more appropriate for establishing which legislators participate actively in the legislative process for particular bills, either through their vote or their leadership role.

The market approach has three major elements that enter into the estimation process. The first is a demand curve, the second is the intercept of the supply curve and the final one is the supply curve itself. Due to the exploratory nature of the theoretical analysis, the empirical research was segmented in order to emphasize major elements.

One specification is the personal characteristics model. Essentially, this is an attempt to estimate the intercept of a supply curve with the vertical axis. It is the reservation wage, the minimum price that must be offered in order for the legislator to consider legislative action, i.e., in order to obtain his/her vote. It was argued that the reservation wage/minimum price should vary inversely to the congruence between the political ideology of the legislator's party and the ideological implication of the distribution considered in the bill. It should be noted that prices will not be observed directly. Rather, a positive coefficient will indicate an increased likelihood to vote for the bill, and therefore a lower reservation price. For demand variables, a positive coefficient indicates willingness to pay a higher price.

The other specifications are the combined models which estimate the supply and demand curves. Unfortunately, there is some confusion generated by these specifications. If the supply curve depends on the interest groups involved as described above and the demand curve does also, how are the curves separately identified? It becomes a matter of interpretation since the available indicators are the same for both curves. In essence, the combined models represent comparisons between the individual voting behavior theories and a first attempt at specifying the supply of and demand for legislative action.

III. METHODOLOGY

This chapter specifically concerns how the analysis presented in the report was executed. Unfortunately for this type of study, U.S. Census information and school district information are not collected by legislative district. As a consequence, the chapter that follows describes the states in which the analysis took place, the information that was collected, the mapping of the information into legislative districts, the methods used to collect and analyze the qualitative interviews and the statistical method used to analyze the quantitative data. It is important to understand the study design in order to evaluate the significance of its findings.

General Overview of Each State's Legislature

The legislative voting behavior study focused upon three states: Michigan, Missouri, and Washington.* These three states exhibit a diversity in the kinds of school finance legislation enacted, and a diversity in geographic and socioeconomic characteristics. Michigan (total 1975 population of approximately 9 million) is in the North Central region and has a large manufacturing sector, especially concentrated around the automobile industry. Missouri (total 1975 population of almost 5 million) is in the Midwest and has a much larger farming sector while having several metropolitan areas. Washington (total 1975 population of approximately 3 1/2 million) is in the Northwest and is split into a fairly metropolitan western section and a more rural and farming eastern section.

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*The original proposal for the voting behavior study listed New York instead of Michigan. However, it was found that in New York most school finance issues are decided in caucus, and roll call votes are often nearly unanimous. Since a roll call vote analysis (such as in the present study) needs to analyze causes of the yes/no split on an issue, the Michigan school finance reform legislation was chosen as an alternative.

Similarities between the three states also exist. For example, approximately half of the House districts in each state can be classified as being over 90 percent urban. Each of the states has one or two large metropolitan centers (i.e., Seattle, Detroit, St. Louis, etc.) which include a large number of legislative districts. The three states also are similar in area: Missouri occupies approximately 69,000 square miles; Washington, 65,500 square miles; and Michigan, 56,800 square miles.

Each state has two houses in its legislative body, a Senate and a House of Representatives. However, the makeup of these legislative bodies is different in each state. Missouri has 163 representative districts; Michigan has 110 districts; and Washington has 49 districts (with two representatives being elected from each district, for a total of 98 representatives). The number of people represented by a particular legislator varies among the states. Michigan has an average of 80,750 persons per representative district. In Missouri, representative districts have populations between 28,500 and 29,000 (approximately). This is about 38 percent of the population per district in Michigan. The range of population in Washington legislative districts is between 68,000 and 70,500 (approximately), with two representatives being elected from each district. There are fewer senatorial districts in Michigan (38) and in Missouri (34) which means a large population per district. In Washington, the senatorial districts are the same as for the representatives, but only one senator is elected from each district. In all three states, representatives are elected every two years, and senators are elected every four years.

Sources of Information/Data Collection

Roll Call Tabulations and Content of Proposals

The collection of information began with the specific bills to be analyzed. In each of the three states the major school finance reform measure was chosen first: HB 131 in Missouri, 1977; Senate Bill No. 110 in Michigan, 1973; and HB 960 (along with HB 1086) in Washington, 1977. The House Journal entries were obtained for each of these bills. This source provided the tabulation of roll call vote data for the bill, and for any amendments which were passed on a roll call vote format. In most cases the content of the amendments was discussed in the Journal. Further, copies of the printed bills -- both the final version and in-progress versions -- were obtained from each state.

Additional supplementary materials concerning the school finance reforms in each state were acquired in the course of the research. Discussions on the progress of HB 131 in Missouri were found in selected issues (March through June, 1977) of the "Governor's Conference Update Bulletin" printed by the Governor's Conference on Education. In addition, this conference published its "Educational Finance Report" of December 3-4, 1976. The "MSTA

Legislative Bulletin" written by the Missouri State Teachers' Association also provided summaries of the legislative process. Furthermore, the Missouri Department of Elementary and Secondary Education (Arthur L. Mallory, Commissioner of Education) published two documents that facilitated the voting behavior analysis: "The School Foundation Program: An Evaluation Report" (1978) and "Toward a Revision of Missouri's School Finance System" (1980) written by Dr. John E. Moore, Jr., Assistant Commissioner for Administration.

Understanding Michigan's school finance reform (SB 110) was aided by a publication entitled "New Equity in Michigan School Finance: The Story of the Bursley Act." This was written by Gene Caesar, Robert N. McKerr and Dr. James Phelps, and published by The Senate Committee on Education in 1974.

The research on Washington's HB 960 and HB 1086 was facilitated by the historical account of the legislation in Diana Hadden Gale's dissertation, "The Politics of School Finance Reform in Washington State 1975-1979" (University of Washington, 1981). Useful summaries of HB 960 at different stages in the process were written by the Majority Caucus in the House of Representatives. Also helpful was the "legislative proposal" of the Citizens for Fair School Funding, and recommendations of the Management Team (composed of representatives from the Washington State School Directors' Association, the Washington Association of School Administrators, the Association of Washington School Principals, and the Washington Association of School Business Officials).

In addition to all the written materials that were acquired, interviews also were conducted in each of the states with people who were knowledgeable about the school finance reform process. These interviews, and the legislative leadership index which was generated from the interviews, will be discussed in the final section of the present chapter.

To widen the scope of the legislative voting behavior analysis, several other pieces of legislation also were analyzed. Roll call/content information was collected for the Missouri Senate on HB 131 as a cross-chamber comparison; for the proceedings on HB 350 in the Missouri House in 1975 as a pre-reform camparison; and for certificate-of-need legislation (HB 1413 in the Missouri House, 1977; and HB 553 in the Washington House, 1971) as a cross-issue comparison.

Individual Legislator Characteristics

One aspect of the study is the attempt to relate various school finance votes (yes/no) of a particular legislator to aspects of his/her personal frame of reference. Information on personal characteristics was obtained from manuals -- popularly known as "blue books" -- published by each state for each legislative session. Specifically, the following editions of manuals were used: The Official Manual of the State of Missouri for 1975-1976, and for 1977-1978; The Michigan Manual for 1973-1974; and the Legislative Manual of the State of Washington for 1977, and for 1971. Included in the personal data used in the analysis were age of the legislator, number of years of service in the legislature, party affiliation, and committee membership.

County Census Data

Demographic data about the region of the state from which the legislator was elected were taken from several sources. The first source was the County and City Data Book, 1977, published by the U.S. Bureau of the Census, which provided figures on the total population, population per square mile, change in population from 1970 to 1975, percent urban, percent black, percent over 65 years of age, percent employed in manufacturing, percent working in wholesale/retail trades, per capita income, median family income, number of AFDC recipients and percent of land in farms.

Hospital and Physician Data

Information was collected from American Medical Association publications for use in the certificate-of-need analyses in Missouri and Washington. Specifically, information was obtained on total number of non-federal physicians, patient-care physicians, surgical specialty physicians, and hospital-based physicians; plus data on the number of hospitals and hospital beds. The AMA source for Washington data was Physician Distribution and Medical Licensure in the U.S., 1971; and for Missouri, the same publication for 1976.

School District Data

In the three states, information was needed to help estimate the impact of the legislation on school district finances. The school district data collected included the following: total state aid distributed to local school districts, local tax rates, local revenue amounts, total school expenditures, equalized assessed valuations of property, number of pupils, and number of teachers. In Missouri, a cost-index factor also was available, plus information on growth rates in suburban and rural areas.

Sources of Missouri school district information were computer tapes prepared by the Missouri State Department of Education for projects carried out by the Education Commission of the States in 1976 and 1980. Sources of the Michigan information were booklets published by the Michigan Department of Education entitled "Summary of Expenditure Data for Michigan Public Schools, Bulletin 1013," for 1972-73 and for 1973-74. In addition, numbers of pupils enrolled in various categories of special education in Michigan school districts were obtained from a publication entitled "Trends in Special Education 1971-81" compiled by the Special Education Services of the Michigan State Board of Education. For the state of Washington, the sources were bulletins prepared by the Superintendent of Public Instruction containing statistics on levy elections and collections, assessed property valuations, general fund expenditures and general fund revenues for 1976-77 and 1978-79.

Teacher Union Data

Because this is a study on school finance legislation, in which education interest groups were expected to be factors, it was important to acquire some determinants of teacher union strength in the various legislative districts in each state. Letters were written to the major unions requesting membership counts. The Missouri State Teachers' Association provided a membership count by county (as of June 30, 1977). The Missouri

NEA (an affiliate of the National Education Association) provided a membership count by school district for 1978-79. The Washington Education Association sent a listing of numbers of members by school district (as of April 1, 1981). No other unions were able to provide usable counts of their membership. To get an indication of teacher influence in Michigan, the number of teachers per capita was used in the analysis -- since the vast majority of teachers in Michigan belong to one of the two teacher organizations.

Legislative District Population

Of critical importance to the study were the legislative district population figures. The total population per district was easily acquired using the "blue books." However, the components of legislative district population figures contributed by individual counties also were collected.

There are two possible configurations of district and county relationships which affect the kind of population data that was needed: (1) A particular legislative district is entirely within one county; or (2) a particular legislative district encompasses all or parts of two or more counties. Figure 7 is an illustration of the first possibility. In this case the population of the legislative district (as listed in the "blue book") was sufficient.

The type of information that was needed for the second possibility is illustrated in Figure 8. A hypothetical legislative district (with a total population of 70,000) included all of one county and parts of two other counties. The component

FIGURE 7

Legislative District
Entirely within County

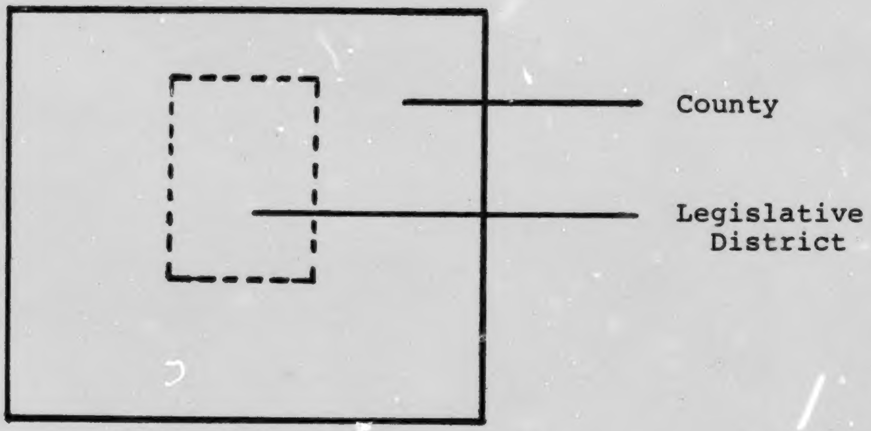
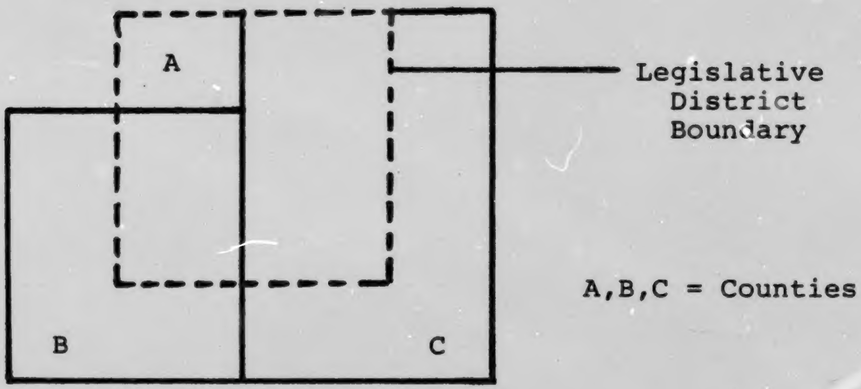

County
Legislative District

FIGURE 8

Legislative District
Encompassing All or Part
of Two or More Counties


A
Legislative District Boundary
A,B,C = Counties
B
C

parts of the legislative district population that were contributed by these three counties needed to be known. In this hypothetical example, all of county A (with a population of 10,000) was in this particular legislative district; county B had only part of its population (20,000) in this legislative district; and county C also had only part of its population (40,000) in this particular district. (The remaining parts of counties B and C would, of course, be located in other legislative districts.)

This breakdown of population information (by legislative district and counties within) was important to obtain because it was the basis for allocating any information that was collected at the county or school district level (e.g., county census data, number of pupils in the school district, number of teacher union members in the county) to legislative districts. The methods of allocation are discussed in the next section.

Sources for the Missouri legislative district population figures are "State of Missouri Election Laws 1978" published by the Secretary of State, and U.S. Bureau of the Census population data compiled for townships within counties. For Michigan, the Michigan Manual lists component parts of legislative district populations by townships and counties. For Washington, the Superintendent of Public Instruction published a profile of county population components of legislative districts entitled, "1970 Demographic and Socio-economic Profiles of the Populations of the 1972 Congressional and Legislative Districts of the State of Washington."

Allocating County and School District Data to the Legislative District

A process was established to map data from one unit of analysis to the legislative district level. If raw data was available at the school district level, the first step was to translate the school district information to an average or sum for the entire county. It was possible to do this because even though some school districts actually encompassed parts of more than one county, for accounting purposes in each of the three states each school district was assigned by the state to only one county. Values such as number of pupils or dollar amounts of state aid could be summed for all school districts in a county. However, values expressed as a rate, such as the tax rate, could not be summed and therefore a weighted average for all school districts in the county was calculated. This average was weighted by the number of pupils in each school district.

If raw data were available at the county level, or if the data had been apportioned to the county level as described above, a final procedure was required to allocate the county level data to the legislative district. If a legislative district was entirely contained within one county (as in Figure 7), some of the characteristics of the county as a whole could be assigned to that particular legislative district. For example, if the county was 80 percent urban, then the legislative district was characterized as being 80 percent urban. As long as the information was delineated as a percent or a rate (e.g., local tax rate), the county level data could be applied directly to a legislative district that was entirely contained within the county. However, other information was expressed in total numbers or total dollars terms, e.g., number of pupils or dollars of state aid. With the second type of data, a part of the total county figure (numbers or dollars) was assigned to the legislative district -- based on a proportion of the legislative district population to the entire county population.

If a legislative district contained all or parts of several counties (as in Figure 8), all values in the data needed to be weighted or apportioned. If information was expressed as a rate or percent, the average for the relevant counties was assigned to the legislative district. Furthermore, this was a weighted average -- weighted on the basis of county population in proportion to the contribution of the counties to the total legislative district population. Finally, if information was expressed in total numbers or total dollars, the number was first adjusted for what was included in each of the portions of the counties within the legislative district. The adjustment was based on the proportion of the county population within the legislative district to the total county population. The contributions of the individual counties were then summed to express a value for the entire legislative district.

Additional Variables Developed from the Primary Data

Besides the values for various measures taken from the primary sources of information, two other types of indicators which were important in the study were derived from the primary/raw data. These were (1) cue-giving indicators given by selected sets of legislators, and (2) the factored constituency indicators -- the first indicating a "desire or need" for services provided by the state, and another indicating "rural/urban lifestyle." Details as to the derivation of the constituency indicators were presented above in Chapter II.

Cue-giving

In determining whether a cue was given, two committees (education and appropriations) and the leadership of the legislative body were examined. If at least 80 percent of all the members of one political party sitting on a committee (or belonging to the leadership) voted in the same direction on a bill or amendment, it was assumed (and appropriately coded) that a cue was given to all the other members of the same party in the legislative body. For example, if 80 percent of the democratic members of the House Education Committee voted in favor of a particular bill, all other democrats in the House were designated as having been given the cue. When developing the cues from the committees, no distinction was made for cues from the committee leadership. Committee makeup -- both chairs and other members -- were used to determine the 80 percent minimum.

When designating leadership in the entire legislative body, the following set of positions was considered to constitute the leadership:

> Missouri House - speaker; speaker pro tempore; majority and minority floor leaders; whips and caucus chairs.
>
> Missouri Senate - president pro tempore; democratic and republican floor leaders and caucus chairs.
>
> Michigan House - speaker; speaker pro tempore; majority and minority floor leaders and whips.

Washington House - speaker; speaker pro tempore; majority floor leader; minority leader; majority and minority caucus chairs and whips; minority organization leader.

Qualitative Analysis and Development of a Policy Leadership Measure

In-depth interviews were conducted with a number of individuals in each state. People were chosen for interviewing who had been involved with, or were knowledgeable about, the legislative process leading to the enactment of the school finance reform legislation in each state. The purpose of the interviews was twofold: (1) a qualitative analysis of what had happened during the reform period as an adjunct to the roll call tabulations and other written materials; and (2) an assessment from the interviewees of who among the legislators had been the significant policy leaders (both proponents and opponents) of the reform measure.

Qualitative Analysis

The interviews lasted between one and two hours and covered a number of topics relating to school finance. In general, most of the interviews touched upon several broad "categories" of information relevant to the legislative voting behavior study. Among these "categories" were the following: (1) the history of school finance reform in the state including school finance bills considered in prior years, any court decisions mandating some type of change, or study committees which examined school finance; (2) the financial situation at the time of the reform, including the sources of school funding and the overall state financial picture; (3) interest groups and constituency influences, including discussions detailing the organized groups and their level of involvement, and other more generalized constituency factors such as rural/urban considerations; (4) highlighting of the main issues in the reform measure, including pivotal or significant debates about the main issues; and (5) other factors affecting a legislator's decision, including political party influence or the kind of information a legislator had available, such as computer printouts.

Leadership Ratings

In addition to talking about the reform measure, nonlegislator informants also examined a list naming all legislators who had served in the House of Representatives (and in the Senate in Missouri) at the time the school finance legislation was enacted. The list of legislators was organized by membership on the relevant committees (Education, Appropriations and Revenue), followed by the remainder of the legislative body. Informants were asked to point out the "key" legislators who supported and who opposed the legislation. The word "key" was defined in the interview to mean those who were most influential in guiding the legislation to enactment. Furthermore, informants also were asked to designate a second level of involvement of legislators -- i.e., the names of those who were active and important in the process, but who were not the "key" actors.

By using the above procedure, the nonlegislator informants constructed a policy leadership rating for each legislator. For the four settings, the ratings from all informants were then averaged to generate a leadership score which was coded and included as a variable in the data analysis. The leadership variable was used for two purposes. In the analysis of legislators' votes, it was used as a possible determinant of voting behavior -- i.e., as an independent variable. (It was included in the model which measured the affect of personal characteristics on a legislator's vote.) Furthermore, the leadership variable itself also was used as the subject of analysis, i.e., as the dependent variable. In the latter case, the aim was to identify influences on a legislator's decision to become active in a legislative policy area. Types of influences examined were the personal characteristics of the legislator him/herself, and the district/constituency characteristics.

Selection of Qualified Informants

Selection of knowledgeable informants was very important, both for the qualitative analysis and the structuring of the leadership ratings. Legislators themselves could, of course, provide insight into the legislative process. But other individuals also would have observed the progress of the school finance reform measure as it moved through the legislature. Possible resource people (other than legislators) were members of the legislative staffs, representatives of interest groups such as teachers' associations and citizen/taxpayers' associations, members of the state department of education or the school boards association, and any others who might have had an understanding of what was involved in the passage of the bill. The interviewing of various nonlegislators provided a historical perspective from outside the formal legislative body, since the school finance reforms being studied in each state had been enacted five or more years prior to the interviewing.

In order to identify the people in each state who would be qualified informants, a two-step process was implemented. The first step was to locate for each state one or two general informants, i.e., persons with enough familiarity in the area of education politics to be able to suggest names of other people to interview. To find these general informants, key individuals at the Education Commission of the States were asked to give their suggestions. Robert McCall, Director of State Relations at ECS, had many contacts in state legislatures and was able to make several suggestions; and Gloria Frazier, National Coordinator of State Education Policy Seminars (SEPS), provided a list of SEPS coordinators in each state and also suggested several other persons.

Ultimately, the SEPS coordinators in each state plus other persons (and/or their publications) were contacted to suggest people to interview. For Missouri, the SEPS coordinator is Susan Uchitelle, Director of the Coordinating Committee for Voluntary Desegregation; in Michigan, the SEPS coordinator is Douglas Smith, Director for Policy and Legislation in the Department of Commerce (formerly Governor Milliken's special assistant for education); and in Washington, the SEPS coordinator is William Lahmann, Assistant Executive Director of the Washington Association of School Administrators. In addition, names were suggested in conversations with Dr. John Moore, Jr. (Assistant Commissioner, Division of Administration, Missouri State Department of

Elementary and Secondary Education); and with Dr. Diana Hadden Gale (Director of Legislative Policy for the Seattle City Council and former chair of Citizens for Fair School Funding in Washington). For Michigan, suggestions of potential informants also were found in the publication, "New Equity in Michigan School Finance: The Story of the Bursley Act." This publication was authored by Gene Caesar (formerly Educational Consultant to the Michigan State Senate and now an independent consultant working with the Michigan State government on education matters), Robert N. McKerr (formerly Associate Superintendent for Business and Finance and now Associate Superintendent for Finance, Legislation and Personnel in the Michigan State Department of Education), and Dr. James Phelps (formerly Administrative Assistant for Education in the Office of the Governor, and now Associate Superintendent of Elementary and Secondary Education in the Michigan State Department of Education).

After procuring suggestions of people to interview, the second step was to talk with them, whenever possible arrange interview dates, and then travel to the states to conduct the interviews. Dr. Robert Palaich conducted seven interviews in Missouri and eight in Washington during the month of June 1982. Dr. Wayne Wendling conducted four interviews in Michigan in June 1982. The format of the interviews is outlined in the interview guides included in Appendix A. In addition, the nonlegislator informants perused the list of legislators who had been in the legislative body at the time the school finance reform measure was enacted in order to determine the policy leadership ratings.

The interview itself was not recorded. Notes were taken during the session, and afterwards the interviewer made a detailed tape recording of all the information that had been elicited during the session. These tapes were subsequently transcribed and used as part of the available information when describing the legislative process leading to the enactment of the school finance reform package. The names of the individuals interviewed (and their positions) are listed in Appendix B. It is interesting to note that in several instances the original informants also are among those interviewed in person.

Statistical Analysis

As indicated in the previous chapters, there are a number of factors that are expected to influence the vote of the legislator. Furthermore, these factors may or may not be operating simultaneously. The question then becomes: How are the simultaneous influences separated out and isolated so that the various hypotheses can be tested? Regression analysis is one such tool that permits the isolation the independent influence of each variable included in a multiple variable specification. Voting, however, is an either-or situation. Votes are discrete -- yes or no. They do not fall along a continuum. A legislator cannot divide his/her vote on an issue to be 60 percent for and 40 percent against. Because the voting alternatives are discrete, ordinary least squares regression analysis is not an appropriate statistical technique. Several assumptions basic to this technique are violated when this situation occurs. Therefore, the estimates would be subject to statistical criticisms. (For a discussion of shortcomings of ordinary least squares when the dependent variable is discrete, see Goldberger [1964] and Theil [1971].)

Logit analysis is one of several other regression techniques specifically designed for discrete choice problems. The statistical problems alluded to above are circumvented in logit analysis because the logistic function transforms the discrete choice into a continuum which becomes a linear function of the independent variables. For example, let P represent the probability of a legislator voting yes on an issue, which is a function of a set of variables (X) and unknown parameters (B). The logistic transformation is represented by

$$P = e^{XB}/(1+e^{XB})$$

The probability of a legislator voting no (1-P) on an issue is represented by

$$(1 - P) = 1/(1+e^{XB})$$

To convert the discrete choice to the continuum, the log odds of voting yes relative to voting no is calculated by

$$\mathrm{Ln}\ [P/(1-P)] = XB$$

Thus, the log odds is a linear function of the set of variables and unknown parameters. Positive coefficients of independent variables are interpreted as increasing the log odds; negative coefficients are interpreted as decreasing the log odds, holding other things constant.

The logit procedure of SAS Institute, Inc., was used in the analysis. One option available in this statistical procedure is the stepwise inclusion of variables that meet prespecified statistical significance criteria. Statistical significance of 0.30 was required for entry in the equation.

IV. THE 1973 MICHIGAN SCHOOL FINANCE REFORM*

The Law

The Bursley Act in 1973 moved the State of Michigan from a deductible millage foundation formula for distributing elementary/secondary school operating aid to a district power equalizing (DPE) formula. The basic difference between the two is that in the deductible millage approach the incentive for expending tax effort is a function of the property wealth per child (state equalized value; SEV) of the district, whereas in the district power equalizing approach the incentive is tied to each mill levied since each mill results in the same amount of dollars available per pupil, except for the few districts off the formula. Consequently, the prime determinant of the level of spending per child under DPE is the tax effort of the district, whereas SEV was the chief factor in the deductible millage approach.

The deductible millage formula for districts with SEV per pupil above \$17,750 was: aid = \$644 - 16 (SEV/pupil)/(1,000). For districts with property wealth per pupil below \$17,750, the formula was: aid = \$715 - 20 (SEV/pupil)/(1,000). The district power equalizing formula that resulted from enactment of the Bursley Act was: aid = (\$38,000 - SEV/pupil) mills up to 22.

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*The analysis provided in this chapter is based on in-depth interviews with Kathleen Strauss, Gene Caesar, James Phelps and on a telephone interview with Douglas Smith. An excellent analysis of the Michigan School Finance Reform is contained in New Equity in Michigan School Finance, which was written by Gene Caesar, Robert McKerr and James Phelps and published by the Michigan Senate Committee on Education in June 1974.

The Issues

The reform of the Michigan school finance system had been an issue for a number of years. A major study of the system had been completed in 1968 by Dr. J. Alan Thomas. The study, entitled School Finance and Educational Opportunity in Michigan, identified four alternatives for financing the system. One was the continuation of the deductible millage formula and another was an equal yield plan similar to that incorporated in the Bursley Act. The study was one of the forces in getting people to think about changes to the system.

Pressure for change also arose through the advent of collective bargaining by teachers. Bargaining increased salaries paid to teachers and emphasized the difference in the ability to pay among districts. As a result, bargaining was more difficult in districts with fewer resources.

Several other actions were taken in the political arena prior to the Bursley Act. First, the governor and the attorney general had gone into court to determine if the method of funding public elementary secondary education was constitutional according to the Michigan state constitution. The court ruled that the current method was unconstitutional. Second, the governor and the Michigan Education Association had taken a referendum to the voters of the state asking whether elementary and secondary education should be fully funded by the state. The proposal was defeated by more than one million votes in November 1972. The legislature found itself in a position in which it had to respond to the court ruling, but it could not propose a full state funding formula since the voters had overwhelmingly rejected the alternative. By the same token, the issue had not been forced upon the legislators because the legislature had played a role in the court suit testing the constitutionality of the old system. In conclusion, it could be argued that most of the primary actors were ready to make a change. Change was required and statutory reform was the only approach possible.

The Distributional Problems

When Governor Milliken came into office, he declared the K-12 education system in a state of fiscal emergency. A group was appointed to come up with a blueprint for responding to the emergency. The only concrete suggestion was to raise the state's tax on cigarettes two cents per pack. Related to the revenue raising problem, moreover, was the need not to go against the wishes of the population on how to spend money. Another aspect of the full state funding proposal was equal expenditure per child in every district. In the so-called "lighthouse districts" this translated into reduced spending or worse, recapture. Thus it was imperative that a new distribution scheme not interfere with these districts' spending preferences for education. The key distributional problem was how to overcome the emerging expenditure inequity among districts due to the deductible millage approach.

Another distributional problem was the low tax effort of some districts. Under the deductible millage formula, districts could levy taxes at a rate lower than what was deducted, and still receive the same amount of state aid with the only negative consequence being that local revenues were somewhat lower. Consequently, it was felt that there needed to be an incentive for districts to make a greater effort.

The Policy Formation Process

To change the method of funding public education required that existing political alliances be abandoned. In the past the wealthy districts would be bought off by having the categorical "pot" sweetened, whereas the low property wealth districts would be brought in by increasing aid under the operating formula. The equal yield formula split this coalition wide open, and as a result, opposition was to the new formula was very disorganized. What the formula did was blur the distinction between high and low SEV districts and create the distinction between high and low tax effort districts. The other alternative, other than the deductible millage which had been declared unconstitutional, was an equal spending plan. Equal spending was unacceptable because it reduced or recaptured funds in out-of-formula districts. Although the equal yield plan did not help these districts, it did not take anything away, either. Therefore, the equal yield plan was the best alternative for these districts.

The alliances created by the equal yield plan joined the relatively wealthy, high tax effort Republican districts surrounding the central cities with the Democratic districts in the central cities (except Detroit), and the first tier suburbs. The low tax effort districts, including the city of Detroit and the central and northern rural Republican districts, were being affected by the proposal in the same way. In order to stop the equal yield plan, Detroit and the rural districts would have had to join forces, something they were not accustomed to doing.

Other aspects of the process should be pointed out. The Democrats got caught in the rhetoric of equity being equal spending per pupil, which led to a split in the Democratic party. The Democratic proposal actually gave more money to the out-state Republican districts, which is totally contrary to the usual nature of politics. Finally, the basic stumbling block was that the Democratic leadership could not support anything that was proposed by the Republican governor, even though it benefited Democratic districts. Thus, the Democratic leadership did not act in the best interests of some traditional Democratic constituents even though it could be suggested that the formula which evolved was promoted by a Republican governor to benefit mainly urban Democratic school districts.

The Role of the Political Party

Initially, the political party did not play a role. On the Senate side, Senator Gilbert Bursley, Republican chairman of the Senate Education Committee and Senator William Faust, the ranking Democrat on the Senate Education Committee, had reached an accommodation. Support and opposition was bipartisan: if it benefited the legislator's district s/he were for it and against it if it benefited Detroit.

In the House, the leadership was much stronger. Representative William Ryan, the Speaker, was from Detroit and very much opposed to the Bursley proposal. Representative Bobby Crim, the Floor Leader, was very determined to come up with an alternative. It was at this point that the House started to harden along party lines, except for 11 or 12 Democratic representatives from the Detroit suburban area. Also, it was at this time that the Democratic party got caught in the rhetoric of equity being equal spending per pupil.

The bill came out of the House Education Committee intact. (It was the House verson of Bursley.) The Appropriations Committee, however, wanted an alternative. The Speaker's forces on the Appropriations Committee then went in the opposite direction and proposed a bill that was based on achieving a mills and dollar target. This would have given the city of Detroit more money, but it also would have penalized high millage and high SEV districts. The bill went into the party caucuses, but it could not move. The main reason was that the Democratic districts representing the suburbs of Detroit got more money through the Bursley bill. The Republican caucus in the House strongly backed the Bursley bill. Therefore, the bill had the support of a small core of Democratic legislators in addition to a solid Republican caucus.

In the Democratic caucus right before the final vote, Speaker Ryan appealed to the 11 or 12 Democrats who had supported Bursley and asked them to support him in another bill. He promised to protect their districts from any aid loss, but he wanted just enough differences in the House bill so they would have to go into conference with the Senate. All of the Democrats, except one, followed the Speaker. The House bill differed primarily in the fact that the equal yield plan would be adopted for one year as opposed to the three years specified in the Senate bill.

The Revenue Position

State operating aid was increased $41.5 million for the 1973-74 school year, the year the Bursley Act was implemented. The relatively small amount was not dictated by economic conditions. It was early in 1973 and there was very little hint of the recession that would take place from November 1973 to May 1975. The first oil shock was still to come. Instead, it was suggested the increase of $41.5 million represented a conscious decision not to buy out every group. This was possible because the opposition had been fragmented by the equal yield plan. The lack of financial commitment to the new formula was illustrated by the fact that operating aid increased $56.3 million between the 1971-72 and 1972-73 school years even though the deductible millage formula was in effect both years.

The Interest Groups

The active groups included the Congress of School Administrators, the Michigan Association of School Administrators, the Michigan Association of School Boards, the Michigan Education Association and the Michigan Federation of Teachers. In addition, there was another group called the Wayne County Association for School Improvement. The Michigan Association of School Boards and the Michigan Education Association endorsed the equal yield plan. The Wayne County Association for School Improvement also worked actively for the proposal.

The reasons for supporting the Bursley Act varied. The Michigan Education Association represented teachers primarily in the non-Detroit area of the state, including the suburbs of Detroit. Thus, their districts were going to benefit, or not be hurt. The Michigan Association of School Boards adopted a similar rationale; the out-of-formula districts would not be hurt by the proposal. Their endorsement published in the MASB Board-o-Gram indicates the nature of their support.

> MASB Directors have endorsed the "equal yield" concept of S.B. 110, the bill outlining the proposed state aid formula for public school funding. Directors call the proposed legislation "the most feasible `vehicle bill' for education funding." While endorsing the concept, the board noted a constitutional amendment may ultimately be necessary to provide the best means and solutions to the long-term problems of financing education .... In supporting the "equal yield" concept, Directors noted eight areas of S.B. 110 in need of amendment to make it equitable to all K-12 districts in Michigan (MASB Board-o-Gram, March 19, 1973).

The Congress of School Administrators opposed the equal yield plan because they were holding out for an "equal quality" plan which had been proposed by a special task force in 1969. The Michigan Association of School Administrators opposed the equal yield plan for much the same reason.

Several individuals played key roles. Gerald Dunn of the Wayne County Association for School Improvement and Lannie Falvo, the superintendent of the Dearborn school district were singled out for the efforts made in behalf of the equal yield plan. The source of the support and the individuals involved are significant because they are from the same legislative districts in which the split in the Democratic party emerged, the suburban districts around Detroit.

It also was noted that the technical expertise was with the proponents of the equal yield plan. Consequently, no viable alternative emerged from the opposition groups.

Other Influences

It was asserted that there was no grass roots support for the equal yield plan. Instead of a mandate coming from the people, the feeling was that the governor and the legislature had created their own mandate through the supreme court case.

Along the same lines, the interest groups did not play that important of a role. Some endorsed and some opposed the equal yield plan, but they had not proposed it. Taxpayers were not an interest group, although there was circuit breaker legislation which would provide tax relief to individuals living in high tax districts moving through the legislature during the same session. The League of Women Voters was not a factor in the legislation. They were still committed to the concept of full state funding even though the referendum on the issue had been defeated. In addition, these groups did not provide any new information to legislators to back their position on SB 110.

Simulations were available and had been available for about two years. Prior to 1971, developing the state aid distribution formula had been a task of the Appropriations Committees. No member of either body saw a printout. Bursley and Faust changed the rules of the game a year or two earlier by bringing a school aid bill out of the Senate Education Committee. That bill was fought out on the floor using printouts, so by the next year an accommodation had been reached and the simulation results were available to all members.

The Results

Five votes on the Michigan school finance legislation are analyzed below. The first one was the first of three amendments offered by Representative William Bryant, which differentiated operating millage from debt service millage. Specifically, it instructed that local operating millage could be used only for operating purposes, it attempted to place a cap on the percentage that school districts could increase revenues and it placed more stringent requirements on the debt service obligations of districts. The bill was defeated by a vote of 60 to 43. Variables, means and standard deviations are provided in Table 2. The results for the first Bryant amendment are listed on Tables 3 and 4.

The role of the political party is obvious. The indicator is negative, showing Democratic opposition to the amendment, and statistically significant. Even though the political party indicator is the only variable entered in that model, it correctly classifies 95.1 percent of the votes. The role of the constituency also is demonstrated. Both factors, rural/urban lifestyle and desire/need for public services dimensions, are negatively related at statistically significant levels with the vote. Since the first Bryant amendment could be interpreted as an amendment that proscribes how school districts are to spend their money, it might be considered anti-urban and anti-high need districts.

Table 2

MICHIGAN HOUSE, 1973
Senate Bill 110

List of Variables

Description	Mean	Standard Deviation
Political party affiliation of the legislator (1 = Democrat; 0 = Republican)	.53	.50
A measure of constituency influence indicating differences among legislative districts along a rural to urban dimension (positive values indicate urban interests)	.00	.97
A measure of constituency influence indicating differences among districts along a desire for public services dimension (positive values indicate more of a desire for public services)	-.00	.99
Number of AFDC recipients per 1,000 population in the legislative district	53.41	21.77
Percent of population in the legislative district employed in manufacturing (blue collar indicator)	38.58	8.11
Percent of population in the legislative district employed in wholesale/retail trades (small business indicator)	25.90	3.82
Median family income in the legislative district	11,113.38	1519.71
Number of years of legislative service of the legislator	6.68	5.46
Age of the legislator at the time of voting	47.39	11.46
Membership of the legislator on the Education Committee (1 = member; 0 = nonmember)	.11	.32
Membership of the legislator on the Appropriations Committee (1 = member; 0 = nonmember)	.16	.37
Leadership score of the legislator (increasing positive values indicate higher levels of policy leadership)	.22	.47
Per capita change in state aid to schools in the legislative district	9.39	8.36

Table 2 (Continued)

MICHIGAN HOUSE, 1973
Senate Bill 110

List of Variables

Description	Mean	Standard Deviation
Change per capita in general fund expenditures for schools between 1973 and 1974 in the legislative district	23.07	6.15
Total operating millage for 1973 in the legislative district (taxpayer interest group indicator)	24.17	3.01
Number of trainable mentally impaired pupils in the schools of the legislative district	1.88	.51
Number of learning disabled pupils in the schools of the legislative district	1.81	.74
Number of visually impaired pupils in the schools of the legislative district	2.18	.63
Number of teachers per 1,000 population in the legislative district	10.22	1.07
CUES: (if cue is given, indicator = 1)		
Democratic leadership cue on the vote on first Bryant amendment	.49	.50
Republican leadership cue on the vote on first Bryant amendment	.43	.49
Democratic Education Committee cue on the vote on first Bryant amendment	.46	.50
Republican Education Committee cue on the vote on first Bryant amendment	.41	.49
Democratic Appropriations Committee cue on the vote on first Bryant amendment	.42	.49
Republican Appropriations Committee cue on the vote on first Bryant amendment	.40	.49
Democratic leadership cue on the vote on the Geerlings amendment	.49	.50
Republican leadership cue on the vote on the Geerlings amendment	.43	.49
Republican Education Committee cue on the vote on the Geerlings amendment	.41	.49

Table 2 (Continued)

MICHIGAN HOUSE, 1973
Senate Bill 110

List of Variables

Description	Mean	Standard Deviation
Republican Appropriations Committee cue on the vote on the Geerlings amendment	.40	.49
Democratic leadership cue on the vote on the third Bryant amendment	.92	.26
Democratic Education Committee cue on the vote on the third Bryant amendment	.46	.50
Republican Education Committee cue on the vote on the third Bryant amendment	.41	.49
Democratic Appropriations Committee cue on the vote on the third Bryant amendment	.42	.49
Republican Appropriations Committee cue on the vote on the third Bryant amendment	.40	.49
Democratic leadership cue on the vote on the House version of SB 110	.49	.50
Republican leadership cue on the vote on the House version of SB 110	.43	.49
Democratic Education Committee cue on the vote on the House Version of SB 110	.46	.50
Republican Education Committee cue on the vote on the House Version of SB 110	.41	.49
Democratic Appropriations Committee cue on the vote on the House version of SB 110	.42	.49
Republican Appropriations Committee cue on the vote on the House version of SB 110	.40	.49
Democratic leadership cue on the Conference Committee report of SB 110	.49	.50
Republican leadership cue on the Conference Committee report of SB 110	.43	.49
Democratic Education Committee cue on the Conference Committee report of SB 110	.46	.50
Democratic Appropriations Committee cue on the Conference Committee report of SB 110	.42	.49
Republican Appropriations Committee cue on the Conference Committee report of SB 110	.40	.49

Table 3

MICHIGAN HOUSE, 1973
Senate Bill 110

The first Bryant amendment restricts the use of the operating millage, puts a cap on school district revenue and expenditure increases, and proposes state aid for equalization of debt-service millages levied.

	Voting Behavior Models#				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					-6.3767***
Change in state aid	0.0211				
Change in total expenditures	0.1563***				
Total operating millage, 1973			-0.0050		
Rural/urban lifestyle				-0.3511*	
Desire for public services				-1.2936***	
Number of AFDC recipients			-0.0180*		
Percent employed in manufacturing (blue collar)			0.0852***		
Percent employed in wholesale/retail trades (small business)			0.2539***		
Number of teachers			-0.0315		
Median family income		-0.0003**			
Intercept	-4.2242	2.5484	-8.8648	-0.4998	2.3513
-2 log likelihood	119.04	136.18	118.73	106.49	37.25
Model chi square	20.93	3.79	21.24	33.48	102.72
Percent correctly classified	66.0	62.1	66.0	70.9	95.1
Number of observations	103	103	103	103	103

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

Table 4

MICHIGAN HOUSE, 1973
Senate Bill 117

The first Bryant amendment restricts the use of the operating millage, puts a cap on school district revenue and expenditure increases, and proposes state aid for equalization of debt-service millages levied.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	-9.6385***		-6.9157***
Change in state aid		NE	
Change in total expenditures		0.6729***	
Total operating millage, 1973		1.2181**	
Rural/urban lifestyle	1.8783***	NE	
Desire for public services	-1.9238***	NE	
Number of AFDC recipients	NE	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	NE	NE	
Number of teachers		NE	
Median family income	NE	NE	
Years of service in legislature			NE
Age of legislator			NE
Member: Education Committee			NE
Member: Appropriations Committee			NE
Leadership score			NE

Table 4 (Continued)

MICHIGAN HOUSE, 1973
Senate Bill 110

The first Bryant amendment restricts the use of the operating millage, puts a cap on school district revenue and expenditure increases, and proposes state aid for equalization of debt-service millages levied.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		NE	
Republican leadership		3.3722**	
Democratic Education Committee		-15.1858***	
Republican Education Committee		NE	
Democratic Appropriations Committee		NE	
Republican Appropriations Committee		NE	
Intercept	3.3578	-41.2859	3.0445
-2 log likelihood	26.69	20.75	26.03
Model chi square	113.28	119.22	102.36
Percent correctly classified	96.1	97.1	96.8
Number of observations	103	103	93

---

‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

The interest group specification generated some interesting results. The blue collar and small business indicators are positive and statistically significant. The positive coefficient is consistent with a lower demand for public education as typically found in fiscal response studies and with the attitude that schools should be limited in the amount they increase revenues and should be more fiscally responsible. Median family income was significant and carried a negative coefficient. The interpretation is that higher income districts are opposed to restrictions on expenditures, which is consistent with fiscal response research that usually find expenditures for public education higher in high income districts.

The first combined model demonstrated the role of the political party and the constituency. The sign switch on rural/urban indicator to positive undoubtedly is the result of the collinearity between it and the party and desire for public services indicators, which was demonstrated by the ability of the constituency measures to predict political party. None of the personal characteristics of the legislator, other than party, explained variations in the vote. Finally, as would be expected in a strong political party vote, cues are provided by both parties, as indicated in the second combined vote. The emergence of the total operating millage indicator as a statistically significant variable is surprising. The amendment specified that total debt and operating millages should be restricted to 22 mills. Other provisions also were designed to curb high spending districts. Whereas high spending can reflect taste for education or high costs, or some combination, the emergence of this variable, with a positive coefficient, may reflect the concern that spending in high tax effort districts was out of control. Change in total expenditures also is positive and statistically significant.

Representative Edgar Geerlings' Amendment is the second vote to be considered. The circumstances surrounding this vote are a little unclear, but it appears that the primary thrust was to equalize mills levied from 22 to 30 at the rate of 25 percent. Mills up to and including 22 would be fully equalized. The amendment appears to have been adopted (Yes 54, No 47) but was later excluded from the final bill.

As indicated in Table 5 and 6, political party again is a very powerful predictor. The negative coefficient indicates a Democratic vote against it (Representative Geerlings was Republican as was Representative Bryant). Fully 86.1 percent of the votes were correctly classified. Results in the constituency and the economic self-interest models are as expected, but in the interest group specification curious results emerge. Specifically, the tax effort measure is negative and statistically significant even though the amendment would have pumped more funds into the high tax districts. Both the small business and the blue collar indicators are positive, even though the proposal could have resulted in higher tax effort and spending in these

Table 5

MICHIGAN HOUSE, 1973
Senate Bill 110

The Geerlings amendment provides an additional allowance beyond the first 22 equalized mills. (Prior to this amendment, 22 mills were equalized, but the additional allowance was for mills over 30.)

	Voting Behavior Models‡				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					-4.0488***
Change in state aid	0.0066				
Change in total expenditures	0.1101***				
Total operating millage, 1973			-0.1852**		
Rural/urban lifestyle				-0.5557***	
Desire for public services				-1.0341***	
Number of AFDC recipients			-0.0375***		
Percent employed in manufacturing (blue collar)			0.0602*		
Percent employed in wholesale/retail trades (small business)			0.1358*		
Number of teachers			0.0356		
Median family income		-0.0003**			
Intercept	-2.4385	3.1355	0.4513	0.2084	2.6625
-2 log likelihood	129.00	135.47	117.36	110.58	77.22
Model chi square	10.53	4.06	22.17	28.95	62.31
Percent correctly classified	65.3	51.5	70.3	71.3	86.1
Number of observations	101	101	101	101	101

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \le .05$; ** if $p > .05$ and $p \le .10$; * if $p > .10$ and $p \le .30$; NE = Not Entered.

Table 6

MICHIGAN HOUSE, 1973
Senate Bill 110

The Geerlings amendment provides an additional allowance beyond the first 22 equalized, mills. (Prior to this amendment, 22 mills were equalized, but the additional allowance was for mills over 30.)

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	-3.8545***		-5.1315***
Change in state aid		NE	
Change in total expenditures		NE	
Total operating millage, 1973		NE	
Rural/urban lifestyle	NE	NE	
Desire for public services	NE	-0.5720**	
Number of AFDC recipients	-0.0183*	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	NE	NE	
Number of teachers		NE	
Median family income	NE	NE	
Years of service in legislature			NE
Age of legislator			0.0409*
Member: Education Committee			NE
Member: Appropriations Committee			1.9335***
Leadership score			NE

Table 6 (Continued)

MICHIGAN HOUSE, 1973
Senate Bill 110

The Geerlings amendment provides an additional allowance beyond the first 22 equalized mills. (Prior to this amendment, 22 mills were equalized, but the additional allowance was for mills over 30.)

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		-1.4433**	
Republican leadership		NE	
Democratic Education Committee			
Republican Education Committee		2.4876***	
Democratic Appropriations Committee			
Republican Appropriations Committee		NE	
Intercept	3.5245	0.2081	1.0532
-2 log likelihood	75.26	76.49	54.52
Model chi square	64.27	63.04	70.30
Percent correctly classified	86.1	86.1	91.2
Number of observations	101	101	91

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

districts. The confusion may be related to the difficulty in constructing the legislative history of the amendment.

Of the remaining four specifications, only the median family income and personal characteristics models are unusual. Median family income is negatively related, although prior expectations would have called for a positive relationship. Party is negative and statistically significant, and both age and membership on the Appropriations Committee in the House are positive and statistically significant. The Appropriations Committee had been forced out of the limelight by the Education Committee, so this is an unexpected finding. The personal characteristics specificiation generated the highest percent correctly predicted on the vote, 91.2 percent.

The third vote analyzed is the third Bryant amendment, which addressed special education. The amendment was defeated by a vote of 63 to 40. The results are provided in Tables 7 and 8.

Again political party is the dominant variable, indicating the Democratic opposition to the amendment and predicting 92.2 percent of the votes correctly. The other specifications follow very much according to the form established in the previous votes. The main deviation is in the interest group model where indicators of the concentration of learning disabled students and the concentration of visually impaired students are entered in the stepwise logistic regression. The coefficient on the learning disabled measure is positive and the coefficient on the visually impaired measure is negative. In the second combined model, the learning disabled measure also is included in the estimating

Table 7

MICHIGAN HOUSE, 1973
Senate Bill 110

The third Bryant amendment authorizes specific dollar amounts (and revenue sources) for special education.

	Voting Behavior Models#				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					-5.7430***
Change in state aid	0.0236				
Change in total expenditures	0.1347***				
Total operating millage, 1973			NE		
Rural/urban lifestyle				-0.2991*	
Desire for public services				-1.2314***	
Number of AFDC recipients			NE		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			NE		
Number of teachers			NE		
Number of trainable mentally impaired pupils			NE		
Number of learning disabled pupils			0.8922***		
Number of visually impaired pupils			-0.8867***		
Median family income		-0.0002*			
Intercept	-3.8751	1.7100	-0.2914	-0.6529	1.7176
-2 log likelihood	121.13	135.46	115.78	107.88	49.30
Model chi square	16.48	2.15	21.83	29.72	88.31
Percent correctly classified	65.0	59.2	68.0	71.8	92.2
Number of observations	103	103	103	103	103

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

Table 8

MICHIGAN HOUSE, 1973
Senate Bill 110

The third Bryant amendment authorizes specific dollar amounts (and revenue sources) for special education.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	-7.1192***		-5.9253***
Change in state aid		0.1450*	
Change in total expenditures		NE	
Total operating millage, 1973		0.7893***	
Rural/urban lifestyle	NE	NE	
Desire for public services	-1.6739***	-1.1733**	
Number of AFDC recipients	NE	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	-0.1778*	NE	
Number of teachers		-1.6565**	
Number of trainable mentally impaired pupils		NE	
Number of learning disabled pupils		1.9570**	
Number of visually impaired pupils		NE	
Median family income	0.0007**	NE	
Years of service in legislature			NE
Age of legislator			NE
Member: Education Committee			NE
Member: Appropriations Committee			NE
Leadership score			NE

Table 8 (Continued)

MICHIGAN HOUSE, 1973
Senate Bill 110

The third Bryant amendment authorizes specific dollar amounts (and revenue sources) for special education.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		NE	
Republican leadership			
Democratic Education Committee		-4.9411***	
Republican Education Committee		NE	
Democratic Appropriations Committee		NE	
Republican Appropriations Committee		5.1200***	
Intercept	-1.1805	-8.7748	2.0541
-2 log likelihood	38.78	33.41	40.92
Model chi square	98.83	104.20	86.18
Percent correctly classified	93.2	94.2	93.5
Number of observations	103	103	93

---

‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

equation and is positively related. The interpretation attached to these results could be the following: districts with relatively low concentrations of students requiring special education also tend to be relatively prosperous communities. Due to the relatively few numbers, those affected are able to organize and support an increase in funds for their program without placing a significant tax on other programs. Consequently, a small but organized group indicated a positive preference for a piece of legislation to which some legislators responded.

The fourth analysis was the vote on the House version of SB 110. As indicated above, the House bill differed mainly in that the equal yield formula was to be enacted for only one year as opposed to the three years specified in the Senate version. The one year plan was the Democratic alternative and was passed 48 to 44. The results are presented in Tables 9 and 10.

The findings are very consistent with the previous votes except that most of the signs are in the opposite direction. As stated in the narrative above, the Democratic leadership asked for sufficient variation in the bill so they could go to conference. Party discipline held, even though approximately a dozen Democratic legislators preferred the three-year version. Therefore, political party was the dominant measure, but had a positive coefficient, and predicted 97.1 percent of the votes correctly. Perhaps the most interesting result is that the change in total expenditure was negatively related at statistically significant levels. The negative vote undoubtedly reflects the opposition to only a one-year commitment rather than a three-year

Table 9

MICHIGAN HOUSE, 1973
Senate Bill 110

The vote on the perfected House version of SB 110.

	Voting Behavior Models#				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					7.0983***
Change in state aid	-0.0161				
Change in total expenditures	-0.1319***				
Total operating millage, 1973			0.1316*		
Rural/urban lifestyle				0.7290***	
Desire for public services				1.2190***	
Number of AFDC recipients			0.0207*		
Percent employed in manufacturing (blue collar)			-0.1052**		
Percent employed in wholesale/retail trades (small business)			-0.3675**		
Number of teachers			0.0291		
Median family income		0.0004***			
Intercept	3.4009	-4.2453	9.2020	0.2108	-3.7841
-2 log likelihood	124.98	132.00	109.88	101.70	26.92
Model chi square	15.44	8.42	30.54	38.72	113.50
Percent correctly classified	63.7	72.5	72.5	73.5	97.1
Number of observations	102	102	102	102	102

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

Table 10

MICHIGAN HOUSE, 1973
Senate Bill 110

The vote on the perfected House version of SB 110.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	6.7359***		8.0231***
Change in state aid		NE	
Change in total expenditures		-0.4524***	
Total operating millage, 1973		NE	
Rural/urban lifestyle	NE	NE	
Desire for public services	0.8187*	NE	
Number of AFDC recipients	NE	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	NE	NE	
Number of teachers		NE	
Median family income	NE	NE	
Years of service in legislature			-0.1071*
Age of legislator			NE
Member: Education Committee			NE
Member: Appropriations Committee			NE
Leadership score			-1.6387**
CUES:			
Democratic leadership		NE	
Republican leadership		-3.8338***	
Democratic Education Committee		7.3422***	
Republican Education Committee		NE	
Democratic Appropriations Committee		NE	
Republican Appropriations Committee		NE	

Table 10 (Continued)

MICHIGAN HOUSE, 1973
Senate Bill 110

The vote on the perfected House version of SB 110.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Intercept	-3.5194	9.1619	-3.0549
-2 log likelihood	25.40	20.91	22.62
Model chi square	115.02	119.51	104.75
Percent correctly classified	97.1	97.1	96.7
Number of observations	102	102	92

---

‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

by districts that expected to increase spending under the equal yield formula.

The main difference between these results and the earlier ones is that the variable measuring policy leadership is statistically significant with a negative coefficient. It is included in the personal characteristics model on Table 10. That is, those representatives who actively participated in the legislative process over the Bursley Act tended to vote against the House version of SB 110.

The final vote to be analyzed is the House vote on the Conference Report (Yes 85, No 13). It was essentially the same version the House sent to conference except that it was a two-year bill rather than one year. The bill added only $41.5 million to the fund for membership aid, an increase of 5.7 percent. The results are reported in Tables 11 and 12.

Political party was not statistically significant in any of the specifications. The political differences on the bill had been resolved, so party no longer was a factor. Neither the personal characteristics of the legislators nor the cues were statistically significant any more. Instead, legislators had to look directly to their districts.

The tax effort indicator was statistically significant and positive in the interest group specification. The small business measure was negative and statistically significant in several specifications. Median family income was positive and statistically significant in all three specifications in which it was available to be entered. Of particular note is the emergence

Table 11

MICHIGAN HOUSE, 1973
Senate Bill 110

The vote on the joint Conference Committee version of SB 110.

	Voting Behavior Models#				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					0.5108
Change in state aid	-0.0455				
Change in total expenditures	0.0221				
Total operating millage, 1973			0.1784*		
Rural/urban lifestyle				0.5467**	
Desire for public services				0.1238	
Number of AFDC recipients			0.0042		
Percent employed in manufacturing (blue collar)			0.0109		
Percent employed in wholesale/retail trades (small business)			-0.1338		
Number of teachers			0.0506		
Median family income		0.0006***			
Intercept	1.8112	-5.0941	0.0885	1.9738	1.6094
-2 log likelihood	76.03	66.96	67.23	72.75	75.98
Model chi square	0.68	9.76	9.48	3.96	0.73
Percent correctly classified	86.7	86.7	87.8	86.7	86.7
Number of observations	98	98	98	98	98

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

Table 12

MICHIGAN HOUSE, 1973
Senate Bill 110

The vote on the joint Conference Committee version of SB 110.

	Voting Behavior Models#		
	First Combined	Second Combined	Personal
Party affiliation	NE		NE
Change in state aid		NE	
Change in total expenditures		NE	
Total operating millage, 1973		NE	
Rural/urban lifestyle	NE	NE	
Desire for public services	NE	NE	
Number of AFDC recipients	NE	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	-0.1140*	-0.1140*	
Number of teachers		NE	
Median family income	0.0004***	0.0004***	
Years of service in legislature			NE
Age of legislator			NE
Member: Education Committee			NE
Member: Appropriations Committee			NE
Leadership score			NE
CUES:			
Democratic leadership		NE	
Republican leadership		NE	
Democratic Education Committee		NE	
Republican Education Committee			
Democratic Appropriations Committee		NE	
Republican Appropriations Committee		NE	

Table 12 (Continued)

MICHIGAN HOUSE, 1973
Senate Bill 110

The vote on the joint Conference Committee version of SB 110.

	Voting Behavior Models#		
	First Combined	Second Combined	Personal
Intercept	-0.2704	-0.2704	1.9588
-2 log likelihood	64.99	64.99	66.58
Model chi square	11.72	11.72	-
Percent correctly classified	84.7	84.7	87.6
Number of observations	98	98	89

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$;   ** if $p > .05$ and $p \leq .10$;   * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

of median family income in both combined equations. Change in aid per capita was not statistically significant, but since the legislation added only $41.5 million, it was unlikely that the change for any one legislative district would have been sufficient to affect a legislator's vote.

The inclusion of the tax effort measure is understandable if those districts with high effort also are high spending per pupil districts. The proposal would be favored by the voters because it would not restrict the amount school districts could spend on education. Alternate proposals were being circulated that would have capped expenditures, which made the proposal relatively attractive. The inclusion of the small business indicator, with a negative coefficient, may reflect the incentives in the equal yield formula. The small business community may have opposed the legislation because the equal yield formula provides an incentive to increase taxes. Finally, median family income is included because the proposal was designed to increase local effort for public education. Income tends to be a strong determinant of the demand for public education. Thus, districts with relatively higher incomes should favor the legislation. In essence, when all was said and done, legislators in Michigan tended to vote in accordance with the median family income of the district, while being cognizant of the interests of the business community.

Summary

The results of the empirical analysis of the House votes on the Michigan school finance legislation are very consistent with the qualitative analysis and provide a fascinating journey through the legislative process. The results also reveal quite striking differences with the other two states. First, the political party played a dominant role in determining the vote of individual legislators on the amendments and the House version of the legislation, although it disappeared as a factor in the vote on the Conference Report. Second, the political party of the representative of the House district is closely related to the characteristics of the constituency of that district. The two constituency factors, the rural/urban lifestyle and the desire/need for public services indicators, were able to predict the political party of the district, 73 percent of the time. Finally, after all disagreements had been ironed out in conference, the only variable that explained variation in the vote was the median income of the district. Relatively higher income districts, which were not necessarily benefited but also were not taxed by the proposal, supported it.

Another issue is the explanatory power of the alternate theories. It would appear that the political party model is the most efficient theory for the state of Michigan; but Michigan has a reputation as a strong party state. The analysis does reveal that there is room for economic self-interest, interest groups and the median income, in addition to the constituency models. However, these influences become apparent only after the effect of party has been neutralized.

V. THE 1977 MISSOURI SCHOOL FINANCE REFORM

The Law

In 1977, the Missouri Senate and House of Representatives passed and Governor Joseph Teasdale signed into law, major new school finance reform legislation known during the session as HB 131. The first part of the bill dealt specifically with aid for special education. Under the provisions of the legislation, each district with handicapped programs would receive a specific amount per class to carry out those programs. There were three categories of handicapped programs: major handicapped aid was set at $6,000 per class; educable mentally retarded aid was set at $4,500 per class; and remedial reading aid was set at $3,500 per class. The legislation provided for annual adjustments in these rates by the same percentage used as the appropriation for the "Foundation Program." (In Missouri the "Foundation" includes special education and transportation aid along with formula aid.) In the area of gifted programs, state aid was authorized up to half of the cost of instructional personnel and special instructional materials. In addition to the compensation for special education programs described above, an amount of money also was provided for professional staff other than teachers in these programs.

There were a number of changes in the basic definitions used in the computation of state school aid under the legislation. These new definitions are illustrated by the following: the district income factor was defined by using the ratio of a district's adjusted gross income per return to the statewide average adjusted gross income per return; eligible pupils was defined by adding membership to average daily attendance and dividing by two; the guaranteed tax base was defined as a certain amount of equalized assessed valuation per pupil guaranteed each school district; qualified aid to dependent children recipients was defined as those children who are receiving AFDC payments and who are attending the public schools; and finally, the state expenditure factor was set equal to the total state current expenditures divided by the total number of eligible pupils in the state.

The calculation of state aid in Missouri used the above definitions in the following manner (see Table 13). The minimum guarantee per pupil was set at 75 percent of the state expenditure factor. In addition, orphans and aid to dependent children recipients were counted as an additional 25 percent of their actual number and then multiplied by 75 percent of the state expenditure factor. Deductions from the minimum guarantee included the following: 57 percent of the pupil weighted levy adjusted by the district income factor multiplied by the Equalized Assessed Valuation and 57 percent of fines, forfeitures, escheats and intangible taxes received for school purposes. In addition to the basic entitlement, a school district was eligible to receive guaranteed tax base aid if the district was making more than a minimum tax effort.

Table 13

MISSOURI STATE AID CALCULATION WORKSHEET

Minimum Guarantee

1. Number of eligible pupils x (75% of State-expenditure factor)...................... $.......

2. (ADC + orphans) x .25 x (75% of State-expenditure factor)...................... $.......

3. Total minimum guarantee (Line 1 plus Line 2)... $.......

Deductions

4. $\frac{\text{Equalized A/V}}{\$100}$ x (57% of pupil-weighted Levy x district income factor)................. $.......

5. Fines, forfeitures, escheats, et cetera (57% of the amount received the previous year for school purposes)...................... $.......

6. Intangible taxes (57% of the amount received the previous year for school purposes)................................ $.......

7. Total deductions (sum of lines 4, 5, and 6).... $.......

8. Basic entitlement (line 3 minus line 7)........ $.......

Guaranteed Tax Base (GTB) Add-on

9. (GTB minus dist. equal. A/V per eligible pupil) divided by 100 x number of eligible pupils x (dist. equal. operating levy minus 57% of the pupil-weighted levy district income factor)................................ $.......

(cannot be less than "0")

10. District entitlement (line 8 plus line 9)...... $.......

11. Apply hold-harmless or maximum increase clause to line 10............................ $.......

In addition to the operating aid formula discussed above, the legislation imposed a series of limits and caps upon school districts receiving aid from the state. There was a cap on state aid increases set at 25 percent of the difference between the formula amount per eligible pupil and that of the previous year, although the cap could be exceeded if increased appropriations were required. There was a hold harmless provision which stated that no district would receive less than what was received in 1976-77 for the first year, followed by a phased reduction over a five-year period to a base figure guaranteed to all districts. A provision was included delineating how state funds should be spent at the local level, i.e., at least 75 percent of state aid per pupil should be spent for teacher salaries. Finally the transportation aid provision in the new legislation was apportioned on the basis of 80 percent of the prior year costs.

In summary, the major changes in the Missouri school finance system that occurred as a result of the passage of HB 131 included the institution of a guaranteed tax base program as a second tier, the inclusion of a district income factor, the special weighting for AFDC children attending public schools, changes in the teacher salary spending requirement and transportation aid. In Missouri in 1977, the state legislature changed the school funding approach from a system based on a minimal foundation level to a more equitable funding approach that would likely pass the challenge of court review.

The Issues*

During the past five years a number of published studies have evaluated the impact of the 1977 school finance reform in the state of Missouri. In addition to utilizing those written evaluations, a number of persons in the state were interviewed who had been active during the 1977 reform in order to put into focus the issues that needed resolution. All sources indicated that five key issues had to be resolved before HB 131 could have been passed in the Missouri House and Senate. In addition, four other items were of central importance to the debate on the bill and also will be reviewed.

As in most states, the debate over how to count students in the public schools was a central issue in Missouri. The question of using average daily attendance (ADA) or average daily membership (ADM) aroused traditional political conflict. On no other issue in the entire spectrum of concerns that surround the financing of the public schools is there such a clash of "religiously-held" beliefs. The Missouri legislature in 1977 was unable to avoid this question. If anything, the surprising part of the legislature's encounter with the attendance v. membership issue was that a compromise was agreed to, the equal weighting of attendance and membership in the new formula. The compromise on ADA v. ADM signalled that Missouri state policy makers were indeed serious about trying to resolve their school finance problems.

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*The analysis provided in this section is based upon in-person interviews with Dr. Bonita Campbell, Dr. John Moore Jr., Mr. Clark Payne, Dr. William Ray, Dr. Bill Wasson, Senator Truman Wilson and Representative Gary Sharpe. These interviews were conducted in early June of 1982. In addition to these interviews, a number of documents were particularly helpful in putting together this section on key issues. Especially helpful was "Toward a Revision of Missouri's School Finance System," written by John Moore Jr. and published by the Missouri Department of Elementary and Secondary Education in May 1980.

A second key issue was concerned with the manner in which pupils were counted. The AFDC weighting factor in the existing school finance formula was originally devised with the assistance of Dr. Kern Alexander and Dr. Alan Hickrod. The "concentration factor" was under pressure during the 1977 school finance reform effort because of its tendency to overcompensate city school districts with high concentrations of poor children. The reason for the overcompensation was that the factor used the total number of AFDC recipients, not the number of AFDC recipients attending public schools. The AFDC definition was changed in the 1977 reform legislation in order to focus its benefit more directly on poor children in public schools.

Another key issue in the story of school finance reform in Missouri was the inclusion of income in the measure of wealth used to distribute state aid to local school districts. The push for this aspect of the reform legislation came from the Missouri Senate. The argument was made that the use of property tax levies alone did not accurately reflect the ability of rural and urban school districts to pay for education services. At the time HB 131 was being considered, the state of Missouri was beginning to receive information from its income tax forms on what school district the taxpayer lived in. This information enabled the state to consider modifying the property tax wealth by using the measure, gross personal income per return. The measure was not adopted at full strength, i.e., weighting income and property wealth equally, but rather was adopted weighting property wealth more heavily than income. The use of income in the measure of wealth was an important step in making the Missouri school finance system more responsive to individuals' ability to pay for it.

The fourth important feature of the legislation in 1977 was the addition of the guaranteed tax base add-on to the already existing foundation formula. The driving force behind any guaranteed tax base approach is the tax effort of the participating school district. It was the focus on tax effort that rallied the support for the guaranteed tax base add-on. By including this feature, the legislature was viewed as having satisfied a key aspect of the concern over equity, namely taxpayer equity. The legislature felt, and rightly so, that it was much easier to do something about taxpayer equity via the guaranteed tax base add-on provision than by getting into the problem of the comparability of property assessment ratios across jurisdictions.

The final key area in which compromises had to be made in order to secure passage of HB 131 concerned the grandfather and hold harmless provisions in the bill. The importance of these provisions was to protect districts whose aid under the new formula would be less than what they received under the old formula. These types of provisions are always tacked on at the end of reform efforts in order to secure passage and they are never the prettiest aspect of a finance reform package. The process in Missouri proved to be no exception. Figuring out who gets hurt under the new legislation and how to protect them is a difficult exercise even for the most knowledgeable of experts. In the end, the only school districts that were not completely protected by these provisions were the more wealthy districts in suburban St. Louis county.

Other issues that received considerable attention during the reform effort in 1977 included the level at which to set the statewide expenditure factor, the cost-of-education index, the percentage applied to the deductions in the minimum aid calculation formula and the transportation reimbursement percentage. The success in adopting compromises on each of these issues ran the entire gamut from outright rejection, in the case of the cost-of-education index, through substantial compromise, i.e., the deduction percentage being set at 57 percent, transportation reimbursement percentage being set at 80 percent of eligible costs and the foundation level being set at 75 percent of the statewide expenditure factor. No matter how they were finally resolved, these four issues consumed a large amount of time and effort from the interested parties as they each had their moments of consideration on the legislative agenda.

The Policy Formation Process

The seeds of the 1977 school finance reform were planted back in 1971, when the governor and key persons in the State Department of Education met early that year to think about what should happen in Missouri public school finance during the next decade. One of the results of the meeting was to set up, under the auspices of the State Department, a study of public school finance in

Missouri. As stated in the study's final report, "the need for the study grew out of the rationale that the responsibilities of leadership are best exercised by continuous planning, both immediate and long-range in nature, to meet the present as well as anticipated educational needs" (1972, p. 1). The Public School Finance Study, as it was called, focused on the following four aspects of public education: source of funds, distribution of funds, school district structure and educational programs. The members of the four study committees were drawn from the ranks of public educators, legislators, academics, the private sector and from the citizenry at large.

The "source of funds" and "distribution of funds" study committees were the two committees centrally concerned with changes in the school finance funding formula. The recommendations of the "sources of funds" study committee were based on the premise that access to a good education should be equally available to every child and not dependent upon the resources of the district in which the child happened to reside. The committee stated that the principle was not only morally right but educationally sound. The committee recommended a reduction in the property tax portion of public school support, an increase in support from the state general revenue, an increase in the income tax and/or sales tax in order to replace property tax revenues, enhanced supervision by the state tax commission of local assessment practices and a study of the feasibility of a statewide property tax. On the other side of the ledger, the "distribution of funds" study committee recommended that the following changes be made: first, 50 percent of current operational costs should be assumed by the state; second, all flat grant funds should be phased out of the school finance funding formula; third, aid for abandoned buildings program be eliminated; and fourth, school transportation aid and school building aid be examined in order to develop a better reimbursement system for local school districts.

In the years after the release of the Public School Finance Study report, Representative Wayne Goode floated a series of statewide property tax measures in the Missouri House of Representatives. Indeed, during the 1972 through 1974 period, the statewide property tax was the major focus of school finance reform in Missouri. However, every time the statewide property tax made it through the House of Representatives, the measure died in the Missouri Senate. The reasons behind the action in the Senate were, of course, complex and varied; however, the most commonly cited stumbling block was the issue of the comparability of property assessment ratios across assessing jurisdictions. In the meantime, the expenditure equalization disparities among Missouri school districts continued to grow. During this period the only major change in the Missouri school finance formula occurred in the form of a concentration factor that weighted poor children in urban settings in the state aid formula.

Early in 1976, Christopher Bond, the young Republican governor, was pressured by many of his constituents in St. Louis county to call the Governor's Conference on Education in the state. The vehicle of the Governor's Conference had been used on at least two previous occasions by former Governor Warren Hearns to examine education problems in Missouri. This vehicle had its inception during the Eisenhower years with the White House Conference on Education. As a result of its history, education interest groups and citizens in general were familiar with the duties and workings of the Governor's Conference in 1976. The format had remained consistent since in the late 1950s, with the governor appointing a series of study committees to prepare information for consideration by a conclave of delegates from across the state. In 1976, approximately 600 delegates were appointed to the conference from each state senatorial district to meet and discuss the recommendations of the study committees. The adoption by the conclave of the recommendations lent significant political weight to those recommendations when they were presented to the legislature.

The circumstances surrounding the calling of the Governor's Conference on Education were commented upon by many of those interviewed. The impetus for calling the Conference came from suburban St. Louis county. This area is generally property wealthy, upper-middle-class and Republican -- a constituency not likely to benefit from the school finance reform legislation. It was therefore somewhat ironic that both Governor Bond and the school districts of St. Louis county who initiated the Conference were at least somewhat disappointed in the final legislation that was enacted into law. Indeed, Governor Bond who was more responsible for providing the leadership that enacted the reform was less happy with the results than Governor Teasdale, a Democrat, who signed the legislation into law.

There is no substitute for leadership in any reform effort and this was as true in Missouri as it is anywhere else. The Governor's Conference was a key element in the development of the consensus around a series of issues that eventually were adopted by the legislature. In addition to the Governor's representatives, key legislative leaders and key educators were appointed to the Conference. This group was able to arrive at some consensus on many of the major elements of the school finance reform package. The Governor's Conference played a very important role in bringing together the various education interests on the major elements of the legislative package. However, another aspect of leadership, aside from consensus and momentum that was provided by the Governor's Conference, was the individual contributions of several legislators. Preeminent among these was Wayne Goode. Representative Goode was often identified as "the other important factor" crucial to the passage of HB 131. He was both very knowledgeable on the intricacies and ramifications of school finance formula issues and an extremely credible legislator, carrying the trust not only of the public but also of other legislators. In addition to Wayne Goode there were two other legislators whose leadership role ensured final passage of HB 131. DeVerne Calloway, chairperson of the House Education Committee, was instrumental in guiding the bill through this Committee and in preparing amendments for the full House on some of the difficult questions within the bill. In the Senate, Truman Wilson, vice-chairman of the Appropriations Committee, was instrumental in developing the income adjustment to the state aid formula and thereby assuring the passage of HB 131 through the Senate -- the place where previous school finance reform efforts had failed. Leadership for the reform effort came from the Education and Appropriations Committees in the House and the Appropriations Committee in the Senate. In addition, in order to fight the battles in the legislature, the principal leaders had to have access to the appropriate computer simulation runs and access to the leaders of the various interest groups via meetings. These services were made available through the State Department.

The reform effort in Missouri could be characterized as exhibiting a low level of conflict. The most extensive and significant conflict came between the Senate and the House versions of the bill. The conflict between chambers had been a traditional stumbling block to passage of school finance legislation during the decade preceding the 1977 reform. Another possible source of disagreement was between members of the two political parties. However, in Missouri interparty conflict was not a critical factor in the passage of HB 131. The stronger cleavage between legislators was due to differences between urban, suburban and rural interests. These differences were only weakly related to party designation and as a consequence interparty conflict was at a minimum. A third possible friction could naturally come from the various interest groups concerned with the issues of school finance. For the most part, however, the differences between interest groups were worked out in the Governor's Conference, both through participation in the study committees and in the process of deciding what recommendations should be made to the legislature. Another possible source of conflict could have emerged from constituents in general. However, this did not occur and its absence was generally attributed to the consensus building performed by the Governor's Conference. There was, however, one issue that did put its finger on the raw nerve of political strife in the state, and that issue was the cost-of-education index. This issue is essentially the conflict among urban, suburban and rural school districts. As a consequence, compromises on the adoption of some sort of cost-adjusting mechanism were unattainable during the 1977 reform effort.

The final positions worked out through the legislative process on HB 131 suggested a number of compromises between the urban and rural interests within the state. Examples of this were the ADA/ADM debate, the income factor and the count of AFDC recipients attending public schools. The following quote summarizes one person's perspective on what occurred in Missouri in 1977, "It is an oversimplification to suggest that a coalition of urban and rural school districts, as opposed to suburban districts, put together the compromise in the formula that was finally adopted, yet there is an element of truth in this generalization" (Moore, Jr., 1980, p. 14).

The Results

There were six votes in the House of Representatives on HB 131 which, because of the vote distribution and subject matter, have been selected for analysis. These votes were taken on the following topics: an increase in the minimum flat grant per eligible pupil, a change in the method of funding state aid for pupil transportation, a change in the required deductions from the state minimum aid guarantee, a requirement that local districts spend the same amount of local tax revenue for teacher salaries as was spent in the previous year and spend 80 percent of state aid for teacher salaries, the adoption of a cost-of-education index and the vote on the perfected House version of HB 131.

The Vote on Minimum Flat Grant

In each state that goes through the school finance reform process, one of the hardest decisions revolves around what level to set the hold harmless and/or the minimum flat grant guarantee. Several factors complicate the decision. The first is the concern that the state must provide education services for all children within its borders. A second and somewhat more practical concern is how much aid will be offered to the wealthier districts to convince them to go along with the reform package. A third legitimate concern revolves around the question of maintaining a stable budgeting process such that no district loses or gains more than can be reasonably absorbed between any two fiscal years. There is no direct and consistent way in which states handle this problem.

The House vote on this issue was an amendment to increase the minimum guarantee per eligible pupil from $100 to $200. In the original bill, there was a one-year dollar per pupil hold harmless provision that in subsequent years would be reduced by 20 percent until it disappeared after five years. However, there was no minimum per pupil aid guarantee in the original version of the bill. After the bill was taken up by the House Education Committee, a provision was attached that guaranteed each school district $100 per eligible pupil. The issue considered in the present vote is an amendment to the $100 per eligible pupil guarantee which sets the new guarantee at $200 and adjusts that guarantee upward by the same percentage as the school foundation program is adjusted in each succeeding year (defeated: Yes 61, No 88).

In the complete story of HB 131, this was not the end of the story on the minimum revenue guarantee. Although this particular amendment failed, the House did eventually agree to a $200 per eligible pupil guarantee. However, when the Senate dealt with the bill later on in the session, they raised the base figure to $283 in the first year and provided that the amount would be increased annually by the same percentage that the appropriation of state funds for the school foundation program was changed. In the end, the House went along with the Senate's provision on this issue. In Table 14 a short description is given of the variables used as indicators of various theoretical concerns, along with the variable mean and the standard deviation.

The results for the five independent theories on the increase in the minimum guarantee are presented in Table 15. The Table shows that the economic self-interest indicator, change in state aid, is strongly and negatively related to the vote on the amendment with districts receiving larger changes in state aid most likely to vote against the increase. The indicator of median family income also was significantly related to the vote. Its

Table 14

MISSOURI HOUSE, 1977
House Bill 131

List of Variables

Description	Mean	Standard Deviation
Political party affiliation of the legislator (1 = Democrat; 0 = Republican)	.68	.46
A measure of constituency influence indicating differences among legislative districts along a rural to urban dimension (negative values indicate urban interests)	-.00	.95
A measure of constituency influence indicating differences among districts along a desire for public services dimension (positive values indicate more of a desire for public services)	-.00	.96
Number of AFDC recipients per 1,000 population in the legislative district	43.82	35.00
Percent of population in the legislative district employed in manufacturing (blue collar indicator)	28.87	7.17
Percent of population in the legislative district employed in wholesale/retail trades (small business indicator)	30.59	4.83
Median family income in the legislative district	8969.69	2271.42
Number of years of legislative service of the legislator	6.52	4.47
Age of the legislator at the time of voting	45.65	11.07
Membership of the legislator on the Education Committee (1 = member; 0 = nonmember)	.17	.37
Membership of the legislator on the Appropriations Committee (1 = member; 0 = nonmember)	.20	.40
Leadership score of the legislator (increasing positive values indicate higher levels of policy leadership)	.10	.25
Percent change per capita in state aid to schools in the legislative district	42.26	19.00
Equalized tax rate in the legislative district (taxpayer interest group indicator)	2.94	.51

Table 14 (continued)

MISSOURI HOUSE, 1977
House Bill 131

List of Variables

Description	Mean	Standard Deviation
Per capita measure of fines collected in the legislative district	1.38	1.46
Per capita measure of intangible taxes collected in the legislative district	1.64	3.62
The actual cost-of-education index values determined for school districts in Missouri and averaged for the legislative district	1.05	.06
Number of Missouri State Teachers' Association members per 1,000 population in the legislative district	6.89	4.39
Number of Missouri NEA members per 1,000 population in the legislative district	2.42	2.35
CUES: (if cue is given, indicator = 1)		
Democratic leadership cue for the vote on the minimum flat grant	.65	.47
Democratic leadership cue for the vote on transportation aid	.65	.47
Republican leadership cue for the vote on transportation aid	.29	.45
Democratic leadership cue for the vote on minimum aid guarantee deductions	.65	.47
Democratic leadership cue for the vote on the teacher salary guarantee	.65	.47
Democratic leadership cue for the vote on the perfected version of HB 131	.65	.47
Republican leadership cue for the vote on the perfected version of HB 131	.29	.45
Democratic Appropriations Committee cue for the vote on the perfected version of HB 131	.54	.49
Republican Appropriations Committee cue for the vote on the perfected version of HB 131	.25	.43

Table 15

MISSOURI HOUSE, 1977
House Bill 131

The amendment is a guarantee of $200 per eligible pupil to be adjusted annually by the same percent as state foundation aid is changed.

	Voting Behavior Models#				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					-1.1912***
Change in state aid	-0.0265***				
District income from fines					
District income from intangible taxes					
Cost of education index					
Rural/urban lifestyle				0.0224	
Desire for public services				-0.7205***	
Number of AFDC recipients			-0.0334***		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			NE		
Number of Missouri State Teachers' Association members			NE		
Number of Missouri NEA members			NE		
Equalized tax rate			NE		
Median family income		0.0001***			
Intercept	0.7377	-1.7768	0.8919	-0.4175	0.4220
-2 log likelihood	192.69	197.28	176.98	186.58	190.58
Model chi square	8.94	4.36	24.66	15.06	11.05
Percent correctly classified	65.1	62.4	63.1	64.4	65.8
Number of observations	149	149	149	149	149

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if p ≤ .05; ** if p > .05 and p ≤ .10; * if p > .10 and p ≤ .30; NE = Not Entered.

sign, as expected, indicated that higher levels of income are associated with votes for the increase. Of the six interest group indicators only the proxy for the poor, AFDC children per 1000 population, was entered into the equation. It was strongly related to the vote on the amendment and was negative in sign. Of constituency measures, the desire for public services indicator was found to be significant and negatively related to the vote, whereas the rural/urban lifestyle indicator was not statistically related to it. The fifth theoretical concern was political party and its indicator was found to be strongly related to the vote on the minimum revenue guarantee indicating that Republicans favored the proposal.

There are two combinations of the above theories that will be examined. The first combines political party, constituency influence, interest group influence and median income while the second substitutes cues from the party leadership, Education Committee and Appropriations Committee for political party indicator and adds economic self-interest to the list. The results of the combined equations are presented in Table 16. These combined equations are all analyzed using a stepwise approach. The criterion by which the indicators are added to the equation is a minimum significance level of $P \leq .3000$. In the case of the first combined equation, four variables were entered: the concentration of poor children indicator, the political party indicator, the rural/urban lifestyle indicator and the small business indicator. The indicator of the poor and the indicator of political party were both strongly and negatively related to

Table 16

MISSOURI HOUSE, 1977
House Bill 131

The amendment is a guarantee of $200 per eligible pupil to be adjusted annually by the same percent as state foundation aid is changed.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	-0.9606***		-0.9914***
Change in state aid		-0.0233***	
District income from fines			
District income from intangible taxes			
Cost of education index			
Rural/urban lifestyle	-0.3825*	NE	
Desire for public services	NE	NE	
Number of AFDC recipients	-0.0290***	-0.0215***	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	0.0686*	0.0855**	
Number of Missouri State Teachers' Association members	NE	NE	
Number of Missouri NEA members	NE	NE	
Equalized tax rate	NE	NE	
Median family income	NE	NE	
Years of service in legislature			NE
Age of legislator			0.0180*
Member: Education Committee			NE
Member: Appropriations Committee			NE
Leadership score			-1.2637*

Table 16 (Continued)

MISSOURI HOUSE, 1977
House Bill 131

The amendment is a guarantee of $200 per eligible pupil to be adjusted annually by the same percent as state foundation aid is changed.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		-0.7194**	
Republican leadership			
Democratic Education Committee			
Republican Education Committee			
Democratic Appropriations Committee			
Republican Appropriations Committee			
Intercept	-0.7344	-0.8153	-0.3857
-2 log likelihood	168.42	167.08	177.40
Model chi square	33.22	34.55	11.48
Percent correctly classified	69.1	67.1	63.3
Number of observations	149	149	139

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

the vote on the amendment showing that Democrats and districts with high concentrations of poor children opposed the amendment. The rural/urban lifestyle indicator and the small business indicator, on the other hand, were both weakly related to the vote -- the lifestyle indicator being negatively related and the small business indicator being positively related. These four independent variables correctly classified 69.1 percent of the legislators voting on the flat grant guarantee.

In the second form of the combined equation, the addition of the economic self-interest indicator and the cue indicators led to a different but related mix of influences. The economic self-interest indicator was strongly and negatively related to the vote on the amendment. Like the previous equation the poverty indicator was strongly and negatively related to the vote. The cue from the Democratic leadership was entered into the equation rather than the political party indicator, and was moderately related to the vote with Democrats voting against the amendment. Finally, similar to the previous equation, the small business indicator was moderately related to the vote on the flat grant guarantee, with a positive sign.

One final equation also is presented in Table 16. That equation examines the influence of personal characteristics of the legislator on his or her vote. The variables included in the analysis were political party identification, tenure of the legislator, the age of the legislator, whether s/he was a member of the Education Committee, whether s/he was a member of the Appropriations Committee, and whether s/he was active in the push to get HB 131 into law. The results of this analysis were somewhat weaker than the other combined equations classifying correctly only 63.3 percent of the legislators voting on this amendment. The indicators that were entered into the stepwise analysis were consistent with what was found before. Party was negatively and strongly related to the vote on the flat grant guarantee provision. In addition, the measure of leadership activity of the legislator in the passage of HB 131 was weakly and negatively related to the vote. Age also was entered into the model at a very low significance level but was positively related to the vote. The signs of the coefficients of these three variables are closely related to the expected positions of the voting legislators.

Each of the above results is intuitively appealing. Votes in favor of the amendment were most likely to come from legislative districts that would not experience large changes in state aid, were not from Democratic districts and were not districts that had high public service needs nor districts in which there were high concentrations of poor children. Votes in favor of the proposal also were likely to come from districts having high levels of median family income. Each of the five individual theories correctly classified between 62 and 66 percent of the legislators who voted on the measure, and as a result, there is no indication of which theoretical consideration is most important.

In the combined equations it is clear that legislative districts with high concentrations of poverty persons and Democratic representation were likely to be against the minimum flat grant adjustment. On the other hand, small business interests whose concerns were closely tied to the taxing structure, felt that it was worth it to give a relatively small increase in the minimum revenue guarantee aid so that all districts would be getting something for their state education tax dollar. The place in these two equations where there is some confusion is the distinction between the rural/urban lifestyle indicator, which was weakly related to the vote in the first equation, and the economic self-interest indicator that was strongly related to the vote in the second. The inclination is to prefer the change in aid measure as the most intuitively pleasing contributor because it is definitely in the economic self-interest of those districts who receive large increments in their change in aid to be opposed to a proposal that could reduce the funds available for distribution through the basic foundation formula. In summary then, the theories most closely related to the vote were economic self-interest, the influence of political party, and some influence from two of the interest groups.

The Vote on Transportation Aid

The transportation aid formula in the state of Missouri prior to 1977 was based on an allowance per pupil transported per month. There were three categories of compensation, \$8 per pupil per month for below three miles of travel, \$5 per pupil per month for between three and four miles travel and \$4 per pupil per month for four or more miles transport. In the original House version of HB 131 it was proposed that school districts receive 80 percent of the allowable cost of such services, except that in no case could a district receive a per pupil amount greater than 125 percent of the state average approved cost per pupil transported in the prior year. State aid for transporting handicapped students was proposed to be paid in accordance with the above provision, plus an amount equal to 80 percent of the additional cost of transporting these students.

The House Education Committee offered two amendments to the proposed state aid formula for pupil transportation. Both concerned the establishment of a phase-in schedule for increases in the state aid for pupil transportation since the new method of funding transportation services entailed a substantial increase in state aid. These two amendments were designed to save the state some money during the first two or three years of the new funding formula. The first amendment phased in the new financing method more slowly, taking four years. In contrast, the second amendment would take only two years. The full House of Representatives adopted the second House Education Committee amendment (Yes 89, No 59) and it is examined below. The remainder of the pupil transportation funding formula story has a Senate component to it. The Senate was concerned both with the phase-in and with the percentage of allowable cost that the state would reimburse. The Senate was willing to increase the percentage of allowable cost to be reimbursed and eliminate the phase-in provision. As a final compromise, the 80 percent of allowable cost was retained and the phase-in provision was eliminated.

Table 17 presents the results for each of the five theories examined. The coefficient for the economic self-interest

Table 17

MISSOURI HOUSE, 1977
House Bill 131

The amendment states that transportation aid to school districts shall not be greater than 80 percent of costs. Further, transportation aid increases shall reach full entitlement by 1978-79.

	Voting Behavior Models#				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					1.3384***
Change in state aid	-0.0519***				
District income from fines					
District income from intangible taxes					
Cost of education index					
Rural/urban lifestyle				-1.7586***	
Desire for public services				-0.0027	
Number of AFDC recipients			0.0217***		
Percent employed in manufacturing (blue collar)			-0.0673*		
Percent employed in wholesale/retail trades (small business)			-0.1873**		
Number of Missouri State Teachers' Association members			-0.0099		
Number of Missouri NEA members			0.6305***		
Equalized tax rate			0.2598		
Median family income		0.0006***			
Intercept	2.7324	-5.1954	5.1488	0.6602	-0.4769
-2 log likelihood	171.00	150.20	119.68	134.63	185.44
Model chi square	28.05	48.84	79.37	64.42	13.61
Percent correctly classified	60.8	80.4	81.1	76.4	67.6
Number of observations	148	148	148	148	148

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

indicator was found to be negative and strongly related to the vote on stepping up the pupil transportation phase-in schedule. It is likely that those districts receiving the least benefit from the equalization formula changes would gain under the new transportation formula, and would want the aid as soon as possible. The median family income indicator had a positive coefficient and was strongly significant. The model also correctly classified 80.4 percent of the legislators voting on the amendment. A number of indicators were entered in the interest group model. The concentration of NEA membership and the concentration of poverty children were both strongly related to the vote and positive in their relationship. The small business indicator was moderately related to the vote, its coefficient carrying a negative sign. In addition, the blue collar indicator was negatively related to the vote and only of weak significance. The interest group equation correctly classified 81.1 percent of the legislators voting on the amendment.

An examination of constituency influences found that the desire for public services indicator was not related to the vote while the rural/urban lifestyle indicator was strongly related to the vote. The sign on the rural/urban indicator was negative, indicating that cities, which carried relatively high transportation costs and therefore would gain under the new formula, were very much in favor of the amendment. The constituency model classified 76.4 percent of the legislators. The final theoretical concern was the influence of political party. In this instance, the political party indicator showed a strong relationship with the vote on the stepped-up phase-in schedule, indicating that Democrats were in favor of the amendment.

The combined analysis equations are presented in Table 18. The first combined equation uses political party and interest group indicators but does not include the economic self-interest indicator. Five of these indicators showed a very strong relationship with the vote on the amendment, including the desire for public services indicator (negative), political party (positive), the rural/urban lifestyle (negative), high property tax rate districts (positive) and small business indicator (negative). Concentration of MSTA members was weakly related to the vote and exhibited a negative sign on its coefficient. This total equation correctly classified 85.1 percent of the legislators voting on the amendment. In the second combined equation, which includes the leadership and committee cues and the economic self-interest measure, a somewhat different configuration of indicators was found. In this equation the concentration of MSTA members in the legislative district, the cue from the Republican leadership and the economic self-interest indicator were all strongly related to the vote on the pupil transportation phase-in amendment and each variables carried a negative sign on its coefficient. The small business indicator also was moderately related to the vote and carried a negative sign. These four indicators correctly classified 83.8 percent of the voting legislators.

In the examination of personal characteristics as they

Table 18

MISSOURI HOUSE, 1977
House Bill 131

The amendment states that transportation aid to school districts shall not be greater than 80 percent of costs. Further, transportation aid increases shall reach full entitlement by 1978-79.

	Voting Behavior Models#		
	First Combined	Second Combined	Personal
Party affiliation	1.6341***		1.2061***
Change in state aid		-0.0358***	
District income from fines			
District income from intangible taxes			
Cost of education index			
Rural/urban lifestyle	-1.5768***	NE	
Desire for public services	-2.2953***	NE	
Number of APDC recipients	NE	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	-0.2116***	-0.1001**	
Number of Missouri State Teachers' Association members	-0.1482*	-0.2741***	
Number of Missouri NEA members	NE	NE	
Equalized tax rate	3.4781***	NE	
Median family income	NE	NE	
Years of service in legislature			NE
Age of legislator			-0.0201*
Member: Education Committee			0.8683*
Member: Appropriations Committee			0.5966*
Leadership score			NE

Table 18 (Continued)

MISSOURI HOUSE, 1977
House Bill 131

The amendment states that transportation aid to school districts shall not be greater than 80 percent of costs. Further, transportation aid increases shall reach full entitlement by 1978-79.

	Voting Behavior Models#		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		NE	
Republican leadership		-1.6273***	
Democratic Education Committee			
Republican Education Committee			
Democratic Appropriations Committee			
Republican Appropriations Committee			
Intercept	-3.0015	7.6660	0.3008
-2 log likelihood	104.15	115.89	167.23
Model chi square	94.90	83.16	16.51
Percent correctly classified	85.1	83.8	67.2
Number of observations	148	148	137

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

applied to the transportation aid vote, the dominant factor was again political party membership. In addition to party, membership on the Education Committee, membership on the Appropriations Committee and the age of the legislator were all weakly related to the vote on this amendment. Membership on the committees carried a positive sign and age carried a negative sign. However, the equation only classified correctly 67.2 percent of the legislators.

Unlike the previous vote when each of the five individual theories correctly classified approximately the same percentage of legislators, three models on the pupil transportation vote performed much better than the other two in correctly classifying the final position of legislators. The three were the interest group model, the median family income model, and the constituency model. The economic self-interest model was probably not important since it represents an amalgam of all new aids and does not focus specifically on transportation, while the political party indicator was eliminated because this was not an ideological vote.

Turning to the combined equations, it was clear from the analysis that the urban areas were very much in favor of the amendment while the rural areas were very much opposed. Whether the indicator of rural areas be the rural/urban lifestyle indicator or the concentration of MSTA membership, the rural/urban split on the vote was quite apparent. Several other factors also were clear. Republicans were against the amendment. Second, some districts not likely to benefit from the proposed changes in the general school aid formula were likely to receive more state aid than before under the percent reimbursable pupil transportation formula (since the transportation aid is unequalized). Third, small business interests were concerned with the amount of money being put in the pupil transportation aid formula since such a large increase in transportation aid could likely have tax implications for them. Finally, it could be argued that the MSTA membership felt that by putting money in the pupil transportation aid formula the state would be diverting it from revenues available through the general aid formula. When it comes to interpretability, the second combined equation again is the best, indicating the strength of the rural and MSTA positions on the issue, the position of the Republican leadership, the importance of this issue to those who were likely to benefit from the overall formula change and the interest of the small business community.

The Vote on the Minimum Aid Guarantee Deductions

The foundation portion of state aid in HB 131 is called the minimum guarantee. State foundation aid is determined by multiplying the number of eligible pupils by a statewide expenditure factor and the result is the amount the state, in conjunction with local school districts, must provide through the foundation portion of the formula. The local portion of this amount is equal to the sum of the deductions provided for in the formula. There is a deduction for the local property tax, including railroad and utility valuation, a deduction for fines and a deduction for intangible taxes. Prior to 1977 the state of Missouri had only a simple version of a foundation program in which the foundation level was set at $400 per pupil and the only deduction was a minimum tax rate requirement for each local school district.

When HB 131 came before the House Education Committee there was a great deal of discussion concerning the level of deductions proposed in the new formula. In the original proposal, 57 percent of the pupil weighted levy was applied to the district's equalized assessed valuation while the full amount of railroad and utility taxes, fines and forfeitures, and intangible taxes were deducted from the minimum guarantee. There were two attempts to modify the configuration of deductions. The first was to eliminate the required deduction of fines and forfeitures and intangible taxes. This amendment was put forward by the House Education Committee but was defeated by the full House. A second amendment put forth by the House Education Committee and examined below changed the percentage deduction of fines and forfeitures and intangible taxes from 100 percent to 57 percent. This brought every deduction into line with the property tax deduction. The final resolution of the issue (passed: Yes 73, No 70) was that the railroad and utility valuation was included in the property taxes, and fines and forfeitures, intangible taxes and property tax were all deducted from the minimum guarantee at 57 percent of their actual value.

In Table 19 the results for each of the five voting behavior theories are presented. Indicators of intangible taxes and of fines were analyzed along with the change in overall state aid in the economic self-interest equation. Both the distribution of fines indicator and the intangible taxes indicator were

Table 19

MISSOURI HOUSE, 1977
House Bill 131

The amendment reduces deductions from state aid of railroad, telegraph and other utility taxes, and of fines, forfeitures, escheats, etc. and intangible taxes from 100 percent (of these monies) to 57 percent.

	Voting Behavior Models#				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					-1.0514***
Change in state aid	0.0057				
District income from fines	0.5260***				
District income from intangible taxes	-0.6850***				
Cost of education index					
Rural/urban lifestyle				0.5005***	
Desire for public services				-0.3386**	
Number of AFDC recipients			-0.0117*		
Percent employed in manufacturing (blue collar)			-0.0544*		
Percent employed in wholesale/retail trades (small business)			-0.0639		
Number of Missouri State Teachers' Association members			0.2543***		
Number of Missouri NEA members			0.2471*		
Equalized tax rate			0.0733		
Median family income		-0.0000			
Intercept	0.0422	0.6045	1.4575	0.0186	0.7576
-2 log likelihood	175.39	197.45	173.56	183.67	189.90
Model chi square	21.35	0.73	24.62	14.51	8.28
Percent correctly classified	64.1	49.0	58.7	62.2	60.8
Number of observations	142	143	143	143	143

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

significantly related to the vote on the decrease in the required deductions. The fines indicator was positively related to the vote, while the intangible tax indicator was negatively related. The results for the intangible tax indicator are counter-intuitive, with the possible interpretation that since the intangible tax in Missouri is a voluntary tax, its incidence created a perverse voting incentive for the legislators. The economic self-interest indicators correctly classified 64.1 percent of the legislator's voting on the amendment. The median family income indicator was completely unrelated to the vote on the amendment. Of the six possible interest group indicators, only the concentration of MSTA membership was entered into the equation. The indicator was strongly related to the legislators' votes on the amendment, showing that districts with high concentrations of MSTA members were likely to vote in favor of it. In the constituency model, the rural/urban lifestyle factor was strongly and positively related to variations in the vote indicating that rural areas favored the amendment. The desire for public services indicator was only moderately related and its coefficient carried a negative sign. Together the two indicators correctly classified 62.2 percent of the legislators. The final theoretical concern was with political party. On the vote, political party was strongly related with Republicans much more likely to vote in favor of the amendment. It seems that the important theoretical consideration is economic self-interest. However, constituency influences and political party are somewhat related. For further clarification, the combined equations are presented in Table 20.

In the first combined equation, which does not include the indicators of economic self-interest, four variables were entered, three being strongly related to the vote. The concentration of MSTA members, the concentration of poverty children and the political party indicators were strongly related to the vote. Democrats and districts with higher concentrations of poverty children were more likely to vote against the decrease in intangible taxes and fines deductions. Districts with higher concentrations of MSTA members tended to vote in favor of the measure. The blue collar indicator, percent employed in manufacturing jobs, was only moderately related to the vote and carried a negative sign. The first combined equation correctly classified 69.2 percent of the voting legislators.

In the second combined equation the results were easier to interpret. In the equation four variables were entered. The concentration of poverty children indicator and the fines and forfeitures per capita indicator were both strongly related to the vote. Higher concentrations of poverty children were associated with votes against the amendment while higher amounts of fines and forfeitures revenue per capita were associated with votes in favor of it. The Democratic leadership cue and the blue collar indicator were both found to be weakly related to the vote and each carried a negative sign. The second combined equation correctly classified 66.9 percent of the legislators voting on the amendment.

Table 20

MISSOURI HOUSE, 1977
House Bill 131

The amendment reduces deductions from state aid of railroad, telegraph and other utility taxes, and of fines, forfeitures, escheats, etc. and intangible taxes from 100 percent (of these monies) to 57 percent.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	-0.8865***		-1.1384***
Change in state aid		NE	
District income from fines		0.3718***	
District income from intangible taxes		NE	
Cost of education index			
Rural/urban lifestyle	NE	NE	
Desire for public services	NE	NE	
Number of AFDC recipients	-0.0133***	-0.0178***	
Percent employed in manufacturing (blue collar)	-0.0466**	-0.0312*	
Percent employed in wholesale/retail trades (small business)	NE	NE	
Number of Missouri State Teachers' Association members	0.1089***	NE	
Number of Missouri NEA members	NE	NE	
Equalized tax rate	NE	NE	
Median family income	NE	NE	
Years of service in legislature			-0.0622*
Age of legislator			0.0271*
Member: Education Committee			0.6684*
Member: Appropriations Committee			NE
Leadership score			-1.4842*

Table 20 (Continued)

MISSOURI HOUSE, 1977
House Bill 131

The amendment reduces deductions from state aid of railroad, telegraph and other utility taxes, and of fines, forfeitures, escheats, etc. and intangible taxes from 100 percent (of these monies) to 57 percent.

	Voting Behavior Models†		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		-0.6005*	
Republican leadership			
Democratic Education Committee			
Republican Education Committee			
Democratic Appropriations Committee			
Republican Appropriations Committee			
Intercept	1.7670	1.5722	0.1483
-2 log likelihood	171.23	170.47	170.50
Model chi square	26.95	26.27	15.75
Percent correctly classified	69.2	66.9	65.2
Number of observations	143	142	135

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†The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

The personal characteristics analysis also is presented in Table 20. In the vote to reduce the required deductions, five personal characteristics were entered into the equation. Only political party was strongly related to the vote indicating that Democrats opposed the amendment. However, the policy leadership rating, age, tenure and membership on the Education Committee were all entered into the equation. The policy leadership index and tenure in the legislature were both negatively related to the vote, while age and membership on the Education Committee were positively related to it. The personal characteristics equation correctly classified 65.2 percent of the voting legislators.

In summary, it is clear that on this vote to reduce the required deductions there was an urban versus rural split. Democratic areas with higher percentages of blue collar workers and children receiving AFDC payments opposed the amendment. On the other hand, rural districts as represented by MSTA membership and districts with high levels of fines and forfeiture revenue were in favor of the reduction. The second combined equation is especially helpful since the economic self-interest and the urban/rural influences are readily apparent.

The Vote on the Teacher Salary Guarantee

At stake on this vote were two guarantees that the state would make to public school teachers on behalf of local school districts. The first concerned the spending requirements for state aid granted to local school districts, i.e., that "at least 80 percent of the state school funds received" under the new revisions in the state aid formula and in the special education aid formula were to be spent by the school district on teacher salaries. The second proposed guarantee concerned local school district monies and stated that of the local revenue produced by local tax levies, as much as was spent per eligible pupil on teacher salaries in the previous year would be spent on teacher salaries in the current year. Further, an enforcement provision was added declaring that in the event the school district failed to comply with the provision, the amount of money by which the district failed to meet its obligation would be deducted from the district's state aid apportionment for the following year. Two aspects of this provision were seriously discussed in the House. The first was the percentage of a district's state aid allotment that must be spent for teacher salaries. The second concerned the inclusion or exclusion of the local maintenance-of-effort provision.

In previous years the state of Missouri did have a spending requirement on state funds for teacher salaries, and it also had the maintenance-of-effort requirement. However, it should be noted that the 80 percent teacher salary requirement pertained to a substantially smaller amount of funds before the 1977 reform than after, since prior to 1977 a $400 per pupil foundation program was in place. The original version of HB 131 as introduced by Representative Goode had retained the 80 percent spending requirement on state school funds generated by the new changes in the formula; however, it had dropped the local revenue spending requirement. As the issue reached the floor action stage in the House, the full House added an amendment which would have applied the requirements to both teacher salaries and fringe benefits. The vote examined below was taken on the next step in the process, that of adopting the 80 percent requirement on state school funds and the maintenance-of-effort requirement on local funds as they applied to both teacher salaries and fringe benefits. The amendment failed by one vote (Yes 72, No 73). Immediately after this vote, the bill was laid over until the next day. When the House reconvened the legislators adopted a compromise provision requiring 75 percent of state school funds and a maintenance-of-effort provision for local tax levies per pupil to be applied to teacher salaries only. The compromise was overwhelmingly adopted by the entire House, accepted by the Senate and became part of the new school finance reform law.

The results of the analysis of the five independent theories on the vote to adopt a spending requirement for teacher salaries are presented in Table 21. Economic self-interest, as defined by the change in overall state aid, was not found to be related to the vote on the local spending requirements. The median family income variable also was unrelated to the vote on the imposition of local spending requirements. These results are not unexpected since every local school district would be affected by the requirement. Looking at the interest group model, only one indicator was related to the vote. That variable was the high tax effort indicator which was strongly related to the vote, with its coefficient carrying a negative sign. The high tax effort districts had an especially good reason to fear the erosion of local budgetary control that this amendment would bring since the

Table 21

MISSOURI HOUSE, 1977
House Bill 131

The amendment states that school districts must spend for teachers' salaries and fringe benefits at least 80 percent of state funds, and as much local tax revenue as was spent for teachers' salaries the previous year.

	Voting Behavior Models‡				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					1.0871***
Change in state aid	-0.0077				
District income from fines					
District income from intangible taxes					
Cost of education index					
Rural/urban lifestyle				-0.1255	
Desire for public services				-0.3666**	
Number of AFDC recipients			NE		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			NE		
Number of Missouri State Teachers' Association members			NE		
Number of Missouri NEA members			NE		
Equalized tax rate			-0.7416***		
Median family income		0.0000			
Intercept	0.3185	-0.1130	2.1833	0.0010	-0.7576
-2 log likelihood	200.23	200.98	195.46	197.37	192.10
Model chi square	0.77	0.02	5.54	3.64	8.91
Percent correctly classified	53.1	51.7	57.9	54.5	61.4
Number of observations	145	145	145	145	145

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

greatest impact would be felt in their districts. This single factor correctly classified 57.9 percent of the voting legislators. In the constituency influence model, the rural/urban lifestyle indicator was not related to the vote and the desire for public services indicator was only moderately related to the vote and carried a negative sign. The relationship between political party and the vote on teacher salary spending requirements was in evidence. Political party was strongly and positively related to the vote and it correctly classified 61.4 percent of the legislators who were voting.

In the combined equations presented in Table 22 the results directly confirm what was found in the individual theory equations. For in both combined equations the only variables entered in the equation were political party (or the cue from the Democratic leadership) having positive signs and the high tax effort school district indicator having a negative sign. Both of these indicators were strongly related to the vote on the local school district spending requirements. In addition, both combined equations correctly classified 69.0 percent of the legislators voting on the requirements.

Finally, looking at the equation for personal characteristics of the legislator, again there is a strong relationship between political party and the vote, with the Democrats being in favor of passage. The age of the legislator also appeared to be strongly related to the vote, with older legislators generally voting against the legislation. Finally, membership on the House Education Committee was weakly related to the vote, with its

Table 22

MISSOURI HOUSE, 1977
House Bill 131

The amendment states that school districts must spend for teachers' salaries and fringe benefits at least 80 percent of state funds, and as much local tax revenue as was spent for teachers' salaries the previous year.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	1.6100***		1.0865***
Change in state aid		NE	
District income from fines			
District income from intangible taxes			
Cost of education index			
Rural/urban lifestyle	NE	NE	
Desire for public services	NE	NE	
Number of AFDC recipients	NE	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	NE	NE	
Number of Missouri State Teachers' Association members	NE	NE	
Number of Missouri NEA members	NE	NE	
Equalized tax rate	-1.2455***	-1.1922***	
Median family income	NE	NE	
Years of service in legislature			NE
Age of legislator			-0.0323***
Member: Education Committee			0.5977*
Member: Appropriations Committee			NE
Leadership score			NE

Table 22 (Continued)

MISSOURI HOUSE, 1977
House Bill 131

The amendment states that school districts must spend for teachers' salaries and fringe benefits at least 80 percent of state funds, and as much local tax revenue as was spent for teachers' salaries the previous year.

	Voting Behavior Models#		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		1.6452***	
Republican leadership			
Democratic Education Committee			
Republican Education Committee			
Democratic Appropriations Committee			
Republican Appropriations Committee			
Intercept	2.5935	2.4627	0.6033
-2 log likelihood	179.31	177.34	172.47
Model chi square	21.70	23.67	14.68
Percent correctly classified	69.0	69.0	65.2
Number of observations	145	145	135

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered

members more likely to vote in favor of the amendment. The combined personal characteristics equation correctly classified 65.2 percent of the legislators voting on this amendment.

By and large, the influences of the five individual theories on the vote were mixed, with only the indicators of political party and high property tax effort being strongly related. However, even these two indicators did not do an exceptional job of classifying the legislators' votes. The combined equations provided evidence for the traditional pro-teacher organization stance of the Democratic party, as well as the local control self-interest of the high tax effort school districts. Such results from the combined equations are very pleasing given the indirect nature of the local school district spending requirements as compared to the other amendments.

The Vote on the Cost-of-Education Index

The issues involved in the adoption of a cost-of-education index are very complex. Such an index tries to separate the expenditures of a given district into two components: the cost of a standard bundle of school resources, and the particular bundle of school resources that a given school district currently has in place. Having made the separation between "cost" and "taste," the cost-of-education index assigns to each school district an indicator of the degree to which its costs are above or below the statewide average costs of education services. A study of this issue was completed for the school finance subcommittee of the Governor's Conference on Education. As a result of that work, there were a number of school districts, especially in metropolitan areas, that pressed for consideration of the index by the Missouri General Assembly.

The politics surrounding the issue were somewhat more straightforward than found on the votes examined above. The cost-of-education index was not included in the original version of HB 131. The amendment modifying the aid generated under the new school finance proposals by the cost index was introduced by the House Education Committee. The amendment would have applied the cost-of-education index to the foundation portion of the formula only. The floor vote on the House amendment that introduced the cost-of-education index was delayed for a time, which allowed an amendment to the House Education Committee amendment to be formulated. Instead of directly applying the cost-of-education index to the foundation portion of the formula for the 1978-79 school year, the amendment to the amendment remanded the cost-of-education index to the Department of Education for review and development, and charged them to report their recommendations to the legislature no later than January 1, 1978. The amendment to the original House Education Committee amendment was adopted and the vote examined below is the vote on the substitute for the immediate adoption of the cost index. The result of the vote examined below (defeated: Yes 64, No 83) put off doing anything about the cost-of-education index.

Table 23 presents the results of the analysis of the five independent theories of legislative voting behavior. The economic self-interest indicators -- change in state aid and the cost index itself -- were both strongly related to the vote on the

Table 23

MISSOURI HOUSE, 1977
House Bill 131

The amendment directs the State Department of Education to submit to the Legislature a cost-of-education index for future consideration.

	Voting Behavior Models‡				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					1.8252***
Change in state aid	-0.0244***				
District income from fines					
District income from intangible taxes					
Cost of education index	19.9196***				
Rural/urban lifestyle				-1.1018***	
Desire for public services				0.6921***	
Number of AFDC recipients			NE		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			-0.1049*		
Number of Missouri State Teachers' Association members			-0.2290***		
Number of Missouri NEA members			NE		
Equalized tax rate			0.8627**		
Median family income		0.0003***			
Intercept	-20.3045	-3.1041	1.9202	-0.2421	-1.5841
-2 log likelihood	152.72	185.02	148.64	152.03	180.07
Model chi square	48.61	16.30	52.69	49.29	21.25
Percent correctly classified	76.2	66.0	76.2	73.5	64.6
Number of observations	147	147	147	147	147

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$;   ** if $p > .05$ and $p \leq .10$;   * if $p > .10$ and $p \leq .30$;   NE = Not Entered.

cost-of-education index. The cost index indicator carried a positive sign, while the change in aid indicator was negative. The two indicators correctly classified the votes of 76.2 percent of the legislators. Median family income also was strongly related to the vote. The sign of its relationship was positive, indicating that the higher the median family income of the district the more likely the legislator would vote in favor of the amendment. A number of interest group indicators were entered in the equation to explain the vote on the cost-of-education index. The MSTA membership indicator was strongly related to the vote and the sign on its coefficient was negative. The property tax effort indicator was only moderately related but carried a positive sign, and the small business indicator was only weakly related to the vote but that relationship was shown to be negative. The presence of these three indicators in the equation correctly classified 76.2 percent of the legislators on the cost index vote. The influence of the constituency indicators -- rural/urban lifestyle and desire for public services -- were both strongly related to the vote on the cost-of-education index. The rural/urban indicator carried a negative sign and the desire for public services indicator carried a positive one. These two variables classified correctly 73.5 percent of the legislators voting on the cost-of-education index. The final theoretical consideration concerned the political party indicator and was found to be strongly related to the vote on the amendment. The Democrats were most likely to be in favor of the adoption of a cost-of-education index.

The results of the combined equation analysis are presented in Table 24. The first combined equation correctly classifies 80.3 percent of all voting legislators. The equation shows that the concentration of MSTA membership and the political party indicator are both very strongly related to the vote. The sign of the MSTA indicator shows that higher concentrations of MSTA members are more likely to lead to a negative vote on the cost index, whereas members of the Democratic party were more likely to vote in favor of such an index. The small business indicator was moderately related to the vote on the cost index and carried a negative sign. Finally, the high tax effort district indicator was only weakly related to the vote on the index and the sign on the indicator was positive. The other combined equation added the cost index indicator and resulted in a similar set of results. (In this instance, the political party indicator was retained in the second combined analysis because no cues were given on the vote.) Four indicators were strongly related to the vote, three carried positive signs indicating that higher levels of median family income, higher values on the cost index, and Democrats tended to vote in favor of the adoption of it. As before, the small business indicator was negatively related to the vote. The second combined equation correctly classified 79.6 percent of legislators voting on the amendment.

The final equation examined on the cost index vote was the personal characteristics equation. In the equation, political party and membership on the Appropriations Committee were the two variables related to the vote. Political party was very strongly

Table 24

MISSOURI HOUSE, 1977
House Bill 131

The amendment directs the State Department of Education to submit to the Legislature a cost-of-education index for future consideration.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	1.7000***	1.6768***	1.9925***
Change in state aid		NE	
District income from fines			
District income from intangible taxes			
Cost of education index		11.8690***	
Rural/urban lifestyle	NE	NE	
Desire for public services	NE	NE	
Number of AFDC recipients	NE	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	-0.1228**	-0.1543***	
Number of Missouri State Teachers' Association members	-0.2211***	NE	
Number of Missouri NEA members	NE	NE	
Equalized tax rate	0.6096*	NE	
Median family income	NE	0.0003***	
Years of service in legislature			NE
Age of legislator			NE
Member: Education Committee			NE
Member: Appropriations Committee			0.7429*
Leadership score			NE

Table 24 (Continued)

MISSOURI HOUSE, 1977
House Bill 131

The amendment directs the State Department of Education to submit to the Legislature a cost-of-education index for future consideration.

	Voting Behavior Models#		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership			
Republican leadership			
Democratic Education Committee			
Republican Education Committee			
Democratic Appropriations Committee			
Republican Appropriations Committee			
Intercept	1.9812	-12.4678	-1.8906
-2 log likelihood	134.90	128.93	164.03
Model chi square	66.42	72.39	24.37
Percent correctly classified	80.3	79.6	65.2
Number of observations	147	147	138

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \le .05$; ** if $p > .05$ and $p \le .10$; * if $p > .10$ and $p \le .30$;
NE = Not Entered.

and positively related to the vote. Membership on the Appropriations Committee, on the other hand, was weakly related to the vote, although it also was positively related such that members of the Appropriations Committee were more likely to vote in favor of the adoption of the cost index. The equation classified correctly 65.2 percent of the legislators voting on the issue.

From the results of the individual theories it is clear that political party and median family income are somewhat related to the vote but do not correctly classify enough legislators to be the central driving force on the vote. Economic self-interest, especially the cost index itself, was clearly the important concept driving the vote on the adoption of such an index. The potential winners and losers were known, therefore it was difficult for the legislator to ignore these facts. In addition, the interest group indicators, MSTA concentration, property tax effort and the small business community, also were very important in determining a legislator's vote on the amendment. In the combined equations, the economic self-interest indicator (the cost index), the median family income, the political party indicator and the small business indicator were, again, all very strongly related to the vote on the cost index amendment.

The Vote on the Perfected Version of HB 131

The final vote examined in the Missouri House was taken on the perfected version of HB 131 (unfortunately, subsequent versions of the bill were passed by voice votes in the Missouri House). This version of the bill included all the amendments passed on the floor concerning various details of the bill. As a brief overview, the perfected version of HB 131 included the revised system of funding special education aid in the state, a revised method of counting eligible pupils and a revised method of computing the minimum aid guarantee, the required state deduction and the guaranteed tax base add-on and changes in the funding of state transportation aid. In addition to these major changes, a number of minor aspects of the law were modified which included caps on state aid increases, a per pupil hold harmless provision, a phase-in provision in the reduction of state aid, a $200 minimum per pupil grandfather clause and a spending requirement for teacher salaries. As can be seen, the vote on the perfected version of HB 131 was not a vote for a particular provision but rather was a vote in favor of an extensive package of revisions to change the way Missouri funded its public education system. A vote in favor of the package would distribute between $50 and $60 million in new state aid to local school districts. Although this was not the final version of HB 131 that was adopted into law, it was very close to that version, with the only major modifications being the addition of an income factor and a "sweetening" of the grandfather provision.

The vote on the perfected version in the House of Representatives in the state of Missouri is a required step if a bill is to pass into law. After all the technical changes have been made through the amendment process, it is necessary for the House to approve the amended version of the bill. This allows the House to unite behind its version of the bill and wait for the

Senate to determine its position on the legislation. If the Senate and House versions differ, then the two bills are sent to conference and the results of the conference would be voted on by each chamber. The vote taken here (passed: Yes 112, No 38) places the House members behind their amended version of HB 131.

The results of the individual theoretical analyses of the perfected version of HB 131 are presented in Table 25. The economic self-interest indicator -- change in state aid per capita -- was shown to be very strongly and positively related to the vote. The indicator classified correctly 74.7 percent of the legislators voting on the bill. Median family income also was strongly related to the vote on the perfected version of HB 131, although the sign of its coefficient was negative. Again, the model correctly classified 74.7 percent of the legislators voting on this issue. Two interest group indicators were strongly related to the vote, with the coefficients of both indicators carrying negative signs. The two indicators were the concentration of NEA membership in a legislator's district and the small business indicator. Together these two correctly classified 76.7 percent of the legislators voting on the bill. The results of the analysis of the influence of constituency on the vote were quite interesting. The desire for public services indicator was strongly and positively related to the vote on the perfected version of HB 131. The rural/urban lifestyle indicator was moderately related to the vote and also carried a positive sign. What is significant about the constituency influences was that this was the first time that both were related to the vote and

Table 25

MISSOURI HOUSE, 1977
House Bill 131

The vote on the House version of HB 131 (prior to Senate and Conference Committee amendments).

	Voting Behavior Models‡				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					0.7942***
Change in state aid	0.0417***				
District income from fines					
District income from intangible taxes					
Cost of education index					
Rural/urban lifestyle				0.3599**	
Desire for public services				0.6047***	
Number of AFDC recipients			NE		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			-0.0913***		
Number of Missouri State Teachers' Association members			NE		
Number of Missouri NEA members			-0.2869***		
Equalized tax rate			NE		
Median family income		-0.0002***			
Intercept	-0.5478	3.7193	4.7099	1.1206	0.5679
-2 log likelihood	153.83	159.15	153.54	161.37	165.70
Model chi square	15.96	10.64	16.26	8.42	4.10
Percent correctly classified	74.7	74.7	76.7	74.7	74.7
Number of observations	150	150	150	150	150

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

carried the same sign. These results provide evidence for the hypothesis that a city/rural coalition was formed for the passage of HB 131. The political party indicator also was strongly related to the vote on the perfected version of HB 131, with the Democrats being in favor of the passage of the bill.

Table 26 presents the results of the combined theoretical models. The combined equation without the economic self-interest indicator and with the political party indicator had three variables included in the equation. The first was the NEA membership indicator, the second was the political party indicator and the third was the small business indicator. The NEA membership indicator and the political party indicator were both strongly related to the vote on the perfected version of HB 131, while the small business indicator was only moderately related to the vote. The NEA membership indicator and the small business indicator were both negatively related to the vote, whereas the results for the political party indicator showed that the Democratic party was in favor of the passage. These three factors combined to classify correctly 74.7 percent of the voting legislators.

In the second combined equation the economic self-interest indicator was entered and the cues were substituted for the political party indicator. The results for the second combined equation showed two direct substitutions, the first and most reasonable was the substitution of the Republican Appropriations Committee cue for the political party indicator. The not-so-obvious substitution occurred in the replacement of the NEA

Table 26

MISSOURI HOUSE, 1977
House Bill 131

The vote on the House version of HB 131 (prior to Senate and Conference Committee amendments).

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	0.8234***		0.9745***
Change in state aid		0.0478***	
District income from fines			
District income from intangible taxes			
Cost of education index			
Rural/urban lifestyle	NE	NE	
Desire for public services	NE	NE	
Number of AFDC recipients	NE	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	-0.0874**	-0.1037***	
Number of Missouri State Teachers' Association members	NE	NE	
Number of Missouri NEA members	-0.2969***	NE	
Equalized tax rate	NE	NE	
Median family income	NE	NE	
Years of service in legislature			NE
Age of legislator			0.0193*
Member: Education Committee			NE
Member: Appropriations Committee			0.6937*
Leadership score			NE

Table 26 (Continued)

MISSOURI HOUSE, 1977
House Bill 131

The vote on the House version of HB 131 (prior to Senate and Conference Committee amendments).

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		NE	
Republican leadership		NE	
Democratic Education Committee			
Republican Education Committee			
Democratic Appropriations Committee		NE	
Republican Appropriations Committee		-1.2212***	
Intercept	4.0886	2.8110	-0.5423
-2 log likelihood	149.64	142.22	152.68
Model chi square	20.15	27.57	8.11
Percent correctly classified	74.7	73.3	74.6
Number of observations	150	150	142

‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$;   ** if $p > .05$ and $p \leq .10$;   * if $p > .10$ and $p \leq .30$;
NE = Not Entered

membership indicator by the change in state aid per capita indicator. Higher amounts of change in aid per capita were related to votes in favor of the bill, the Republican cue was to vote against the legislation and the small business indicator also was negatively related to the vote. Given the performance of the indicators in these two equations, it must be assumed that the NEA membership indicator was acting as a proxy for the suburban interest, the type of area in which NEA membership is high. The suburbs were also the areas that lost state aid under the new school finance reform effort in Missouri.

The final equation shown on Table 26 is the personal characteristics analysis. Again, only political party was strongly related to the vote, with the Democrats being in favor of passage of HB 131. However, membership on the Appropriations Committee and the age of the legislator were both weakly related to the vote and indicated that older legislators were in favor of the vote as were members of the Appropriations Committee. The equation classified 74.7 percent of the voting legislators.

In summary, the second combined equation, though correctly classifying slightly fewer (two) legislators than the first combined equation, is somewhat more appealing. Three variables -- the economic self-interest indicator, the Republican Appropriations Committee cue and the small business indicator -- were all strongly related to the vote on the perfected version of HB 131.

Summary

In the six votes analyzed, a number of factors considered by the legislators when making their voting decisions have become apparent. In several votes, namely the minimum aid guarantee, the cost index and the perfected version of HB 131, the economic self-interest factor was the major influence in the lesiglators' decision calculus according to the statistical analysis. In each of the votes, political party affiliation also was important. Another generally influential factor, especially when the vote involved spending more money, was the small business indicator. In addition, many of the interest groups indicators were related to their appropriate vote, e.g., high tax effort districts strongly opposed the restrictions on local decision making imposed by the amendment requiring the local maintenance-of-effort for teacher salaries. Further, results of the statsitical analysis confirmed what was reported by those interviewed in Missouri.

VI. THE 1977 WASHINGTON SCHOOL FINANCE REFORM*

The Law

The school finance reform legislation adopted in the state of Washington moved through the legislative process as three separate bills. The first piece of legislation was called House Bill 960 (HB 960). The bill provided the definition of basic education that was sought by those concerned with education in the state of Washington. The second piece of legislation was known as the Levy Limitation Bill (HB 1086) and focused on the special levy problem that had surfaced in the majority of school districts in the state. The final component of the school finance reform package was the appropriations bill, in which monies for all state functions were appropriated, including the funds for public education. The appropriations bill in Washington is a long budget bill and contains little information on substantive changes in policies in any of the budget areas. In the case of education, it appropriates a particular dollar amount and provides distribution guidelines. Since the appropriations bill is a "long bill" and addresses a limited aspect of the 1977 school finance package, the vote on it will not be examined here. Rather, the bill defining basic education and the bill implementing the special levy limitation are analyzed below.

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*The analysis provided in this chapter is based on in-depth interviews with Joseph Dear, Diana H. Gale, Kris Van Gorkum, William Lahmann, Terry McCarthy and Dwayne Slate, and Speaker William Polk and Senator Albert Bauer. Further insight into the legislative process in Washington was provided by Diana Gale's doctoral dissertation entitled "The Politics of School Finance Reform in Washington State, 1975-1979."

The intent of the Washington basic education act was to provide students with the opportunity to achieve the skills that were deemed to be requisite to learning. The hope for the basic education act was that it would bring the state into compliance with Article 9, Section 1 and with Article 9, Section 2 of the state constitution. Another part of the basic education act delineated program offerings and hours spent on basic and work skill courses. For example, in kindergarten a program of 450 hours in basic skill courses was required. In grades 1-3, a total of 2,700 hours was required, 95 percent of which was to be taken in basic skills and work skills. In grades 4-6, a total of 2,970 hours of courses was required, 90 percent of which was in basic skills, 5 percent of which was in work skills and the remaining hours to be offered at a district's option. In grades 7-8, a total of 1,980 hours was to be offered, 85 percent of which was in basic skills, 10 percent of which was in work skills and the remaining 5 percent being at the district's option. In grades 9-12, a total of 4,320 hours of courses was to be offered, 60 percent of which would be in basic skills, 20 percent of which would be in work skills with the remainder being offered at the district's discretion. One clarification included in this section was that courses and hours described were not to be required of individual students but were only required to be offered by local school districts, allowing the students to choose among them.

Another section of the basic education act restructured some of the outdated references to the old formula and issued a guarantee for the funding of basic education. This section required public utility district collections, real estate excise tax, federal forest funds and other available revenues to be counted as part of the basic education allotment. The section also eliminated the option of real estate sales tax usages in favor of a one percent sales tax on real estate for the support of common schools. In addition, the section guaranteed that basic education would be considered fully funded by the dollars appropriated to meet the requirements of program offerings and hours and teacher/pupil ratios. Finally, the section assured that the pupil/teacher ratios would be no greater than 25:1 and allowed for the use of personnel with provisional certificates to be counted in these ratio requirements.

The next section of the basic education act covered the procedures used to distribute funds under the act. It stated that the basic education allocation should be given for each full-time equivalent student, and that the formula would recognize certificated staff, classified staff, nonsalary costs and extraordinary costs of remote and necessary schools and small high schools in its distribution. Although the formula was subject to amendment by the legislature, by 1981 it would reflect the ratios of 20 pupils to each certificated staff and 60 pupils to each classified staff. The section defined full-time equivalent students (FTEs), certificated and classified employees, classroom contact hours and rules governing the hiring of noncertificated employees.

In the next sections of the basic education act, the issues of transportation and categorical funding also were addressed. The transportation funding provision reimbursed school districts for transportation costs up to 100 percent until the 1980-81 school year, at which time the reimbursement level would be at 100 percent. Two general levels of categorical programs were authorized. The first provided funding for transportation and programs offered to handicapped students in the state. The second provided allowances for additional funds for urban costs; enrollment fluctuations; vocational/technical institutes; compensatory education programs; bilingual education programs; Urban, Rural, Racial and Disadvantaged programs; gifted students and other programs. The levels of funding for these categorical programs were described in the appropriations bill rather than in the basic education act. The remainder of the basic education act was essentially modifications to provisions that had existed prior to 1977. These modifications reflected the technical change from weighted students to FTE students and more clearly defined accountability standards, school admission standards and the sources of revenue for local school districts.

The second component of the school finance package in the state of Washington was the Levy Limitation bill or HB 1086. This bill specifically addressed the problem of the double special levy failures experienced by many school districts, which left these districts with only minimum local revenues. One of the perceived reasons for the double levy failures was the general feeling that public schools in the state of Washington were relying too heavily on the property tax. Limitations placed on the special levy by the legislation included the following: (1) school districts were allowed to pass one- or two-year special levies; (2) for 1977 levies collectible in 1978, any extra and unanticipated state funds received by the district should be used to reduce those special levies; (3) levies collectible in the future must be limited to 10 percent of the prior year's total state aid allocation; and (4) restrictions were placed on how school districts could use those levies for employee salaries. Specifically, special excess levies could not be used for school district employee salaries with several exceptions. First, districts targeted for the minimum state budget increase would be allowed to use some of the excess levy revenues for a four to six percent increase in district employee salaries, depending upon the increase in the consumer price index during the period. A second exception was that in districts below the statewide average compensation for certificated and classified employees, the compensation could rise to the statewide average level but could not exceed that average. It also was not the intent of the legislature to rewrite any contracts negotiated prior to the adoption of the legislation, and therefore all contracts in effect prior to the passage of the bill would not be effected. Finally, an exception to the levy limitation could be granted by the superintendent of public instruction in cases in which the total dollars per FTE did not exceed 104 percent of the previous year's total dollars per FTE.

The Issues

The issues in school finance facing the Washington legislature in the winter of 1977 were straightforward. The principal task was to come up with a definition of basic education. Pressure for the definition was coming from two sources. In order to restore public confidence in education, the legislature needed to communicate to the public what it was getting for its tax dollar. The second was the court decision in the Seattle school finance case, which asked the legislature to define basic education and fund it. Therefore, both from a public relations and a legal perspective, the pressure was on the legislature to define its goals in public education.

The second issue, property tax relief, was placed on the legislative agenda by the voting public. The alarming occurrence of double levy failures in special levy elections was sending a clear message to public officials. The message was that local property tax was supporting too great a percentage of public education expenditures.

One of the principal reasons most states have shied away from defining basic education is that such a task is a difficult and inexact science. Trying to determine what courses should be offered and how much time students should spend in a particular type of course are questions that curriculum experts have difficulty answering. In addition to the hard decisions about courses and time allotments, legislators in Washington also felt pressure to create a fairly flexible definition such that most school districts in the state would meet the requirements with the programs already in place. These decisions, plus the allocation of time between basic skills, work skills and other elective courses was the difficult problem that the Washington legislature came to grips with.

Another difficulty in defining basic education concerned the inclusion of pupil/teacher ratios in the definition of basic education. There were two parts to the problem. It was not customary in the state of Washington to include in a substantive education bill any factors that would determine the level of spending the state would have to contribute. The inclusion of factors to "drive" education expenditures was deemed to be the role of the Appropriations Committee. The other aspect of the ratios decision concerned the level at which the teacher/pupil ratio was set. Unlike most states where the foundation program debate most frequently occurs in dollar terms, the debate in Washington focused on student to personnel ratios.

As was pointed out above, property tax relief was the second issue of major importance in the school finance reform struggle in the state of Washington . Between 1974 and 1977 voters in local school district elections in the state sent a series of consistent messages to education policy makers -- special levies on property were not the way that voters wanted to pay for public education. Looking under the surface of this taxpayer concern, it was surprising that questions about the role of the property tax had little to do with the equity of tax burdens across school districts. Rather, the feeling was that property taxes should not support as high a percentage of education expenditures as were being supported during that period. In plain terms, the voters were saying replace the special levy as the cornerstone of local school district funding.

An additional plea for reform came from local educators who were finding that the unstable funding system which relied on special levies was playing havoc with their attempts at planning and budgeting, the morale of school personnel, and the lives of all associated with the public schools. Not knowing what the revenue picture of the local districts would be for the next fiscal year required layoffs of a considerable portion of the school work force, large amounts of attention being paid to special levy elections, and general inattention to the task of providing education services to children. The requirement of these extra efforts and the ebb in the morale of public school teachers brought educators to the legislature seeking stabilization of the school finance funding system.

Another, though often unstated, issue before the legislature in Washington was the restoration of the public's confidence in public education. In 1975, double levy failures had occurred in districts educating 40 percent of the state's children. The reason for the public's abandonment of public education has never been systematically explained (Gale, 1981, p. 59); however, several theories had been put forward. As discussed above, there was the concern with property tax relief. In addition, the public's general discontent with education, the desire to know what was going on in the local public schools, and the distaste with having to vote large tax increases every year all led to a severe decline ot the support for public education among Washington citizens. Some of the skepticism had been brought on school districts themselves since several districts had resorted to scare tactics in trying to sell their special levies. Whatever the reason for the erosion of confidence, the legislature knew that the school finance reform needed to be readily understandable by the public and needed to convince them that they were receiving something from the public schools in return for their tax dollars.

The Policy Formation Process

As was indicated in the previous section, one of the major concerns between 1971 and 1977 was the uncertainty of the budgeting process for local school districts in the state of Washington. Between collection years 1971 and 1977, the total special levies submitted for voter approval climbed from $194 million to $428 million. For six of the seven years, between 80 and 92 percent of the special levies submitted were approved. However, in 1976, only 53 percent of the requested special levies were approved, affecting approximately 40 percent of the state's enrollment. In addition to the actual levy failures, the heavy dependence upon special levy elections had led to a situation in which a healthy percentage of school personnel were regularly dismissed due to lack of projected revenue for the next fiscal year. If the special levy elections were successful, many if not most of these personnel would be rehired; however, the damage to morale in this process is quite evident.

In addition to these internal problems, in the early years of the process many school districts had tried to appeal to their voters in the following manner, "If you don't vote in favor of this special levy the public schools in the district will have to close down, doing irreparable harm to the children in the district." However, the rhetoric was soon discounted by voters across the state, for the public felt that the statements by school officials were overstated since they were unable to see any change in the school program during the year following a special levy defeat. The reason for the lack of impact was that levy collections always lagged one year and, indeed, after a levy failure there was no evidence in the following school year that anything had drastically changed. Unfortunately, in the second school year following the election the impact was dramatic. Another concern linked with special levy failure was that of accountability. There was a general feeling that without making a case to the public in which one could show them what they were getting for their education tax dollar, special levy failures would become the rule rather than the exception.

On January 14, 1977, the decision in the Seattle school finance case was handed down. Judge Robert Duran's decision stated that

1. It is the function of the state legislature to define basic education and determine the substantive content of the basic educational program and to provide for the fully sufficient funding of the system through a regular and dependable tax source.

2. The state is not fulfilling its constitutional responsibility by authorizing or requiring the people within a district to pass special excess levies to fund any part of the basic program of education.

3. The present system of funding basic education will be unconstitutional after July 1, 1979 unless the people of the state change the constitution prior to that date.

4. There are three methods for determining whether a state has made ample provision for a basic program: (a) the collective wisdom approach; (b) funding of the state board of education's definition of a state program of basic education adopted May 14, 1976; and (c) funding of the state board of education's accreditation standards as if they applied to the K-12 program.

5. Staffing ratios and salaries are the most significant factors to be considered in the funding of an educational program (Gale, 1981, p. 91).

The judge's decision laid out an agenda for the legislators to pursue during the 1977 session. Unlike in other states, the legislature was not concerned with avoiding the school finance question since the double levy failure problem had to be dealt with anyway. The judge's decision, therefore, added momentum to the growing concern over educational funding.

The third part of the situation that greatly enhanced the likelihood of a legislative solution to the school finance problems was the state's economy in 1977. At that time, and through 1979, the state's economy was experiencing high growth. Money in 1977 and in the foreseeable future, was available to fund the constitutionally required increase in state assistance to local school districts. A fourth circumstance also was conducive to the passage of the school finance legislation was that the problem had been studied prior to 1977 and traditional interest groups -- teachers, administrators and board members -- were all in favor of legislation that would stabilize local school budgets. It was easy for the traditional education interest groups to rally around the public cry for more money and stable budgets for public education. However, none of these groups led the fight for the passage of a new school finance package; that job was left to a newly formed citizen's organization, Citizens for Fair School Funding. This group was successful in focusing citizen interest, and therefore legislator attention, on the issues of stabilizing education budgets, defining basic education, and providing tax relief. The lobbying efforts of this group are chronicled elsewhere (Gale, 1981). Suffice it to say that their efforts to focus the issue for legislators greatly enhanced the likelihood of the school finance reform package emerging from the legislature in 1977.

The school finance reform story in the Washington House during the 1977 session was characterized as a consensus looking for a solution. By and large, all of the representatives were in agreement that something had to be done on the school financing question. What exactly would work its way out of the legislative process, however, was unclear at the beginning of the legislative session. What follows is a sketch of the major events in the school finance policy formation process.

As was indicated, the Duran decision was handed down during the second week of the 1977 legislative session. Immediately after the Duran decision, freshman representative Dennis Heck, from Vancouver, took up the task of defining basic education from his position on the House Education Committee. With the cooperation of the Education Committee chairman, Representative Art Clemente, Heck and House Education Committee staff collected information from a number of local school districts that became the basic building blocks toward a definition of basic education. In this process they used the "collective wisdom approach" (a sample of current practice in several school districts) described by Judge Duran in trying to determine a basic educational program that would be acceptable to the majority of school districts in the state. The work done in the Education Committee proved to be 90 percent of what the state finally adopted as its definition of basic education, though the Senate Education Committee clarified a number of points and made minor additions to the work of the House Committee. When the House Education Committee bill reached the floor of the full House, there were a number of attempts to expand the definition of basic education. These attempts included efforts to make special education, gifted education and Urban, Rural, Racial and Disadvantaged education programs all part of the definition of basic education. Although these attempts to expand the definition failed, they do illustrate the struggle involved in keeping special interests under control. Another problem that had to be worked out in the House was whether the basic education definition would include pupil/teacher ratios. This was a classic struggle between tradition, which held that such decisions were appropriately made in the money committees, and the realization that if some level of program offerings could not be guaranteed in the basic education definition, then the provision of basic education was not assured. The original version of the bill as passed by the House did not include the suggested pupil/teacher ratios.

The bill that was finally passed by the Senate had a number of minor modifications to the definition of basic education but also included the guaranteed pupil/teacher ratio. As a consequence, the Senate and House needed to convene a Conference Committee in order to mediate the differences between the two bills. In the Conference Committee Senators August Mardesich and James McDermott and Representatives Heck and Clemente worked out agreements on the definition of basic education, and the need for a Levy Limitation bill. Eventually both bills passed in the House of Representatives, with the basic education act doing so virtually without opposition.

The Results

Six votes taken in the Washington House of Representatives on the school finance reform package will be examined here. As far as subject matter, the votes are divided into three groups. The first consists of three votes in which there was an attempt to expand the definition of basic education. The next set consists of two votes on preliminary versions of HB 960. The final vote was on passage of the Levy Limitation Bill, HB 1086.

The votes to expand the definition of basic education were amendments to the bill on the following topics: the addition of "gifted programs" to the definition of basic education, the addition of the URRD programs (Urban, Rural, Racial and Disadvantaged) to the definition of basic education, and the inclusion of an adjustment for increasing and declining enrollments. Each of the amendments was defeated on the floor of the House. The second set of votes was taken on complete versions of HB 960: the first was the original House version of the bill which covered the definition of basic education. However, the pupil-teacher ratios that eventually "drove" the funding of the bill were not included in this version. The other vote examined was taken on the Senate version of the bill which included the pupil-teacher ratios. The Senate version of HB 960 was defeated in the House, and this defeat led to the formation of a conference. The third category analyzed included just one vote: the Levy Limitation Bill, HB 1086.

Two votes of the first set examined below are closely related since the method of adding these programs to the definition of basic education was the same in each case -- i.e., to attach the extra program to the definition of handicapped education and include handicapped education as part of the basic education program.

The Vote on Gifted Education Programs

The first amendment, the Chandler, Lee and Dunlap Amendment, proposed the inclusion of the existing gifted program in the definition of handicapped education which would then be incorporated in the definition of basic education (defeated: Yes 36, No 54). There was no great conflict surrounding the gifted education program. It had existed in the state of Washington as an independent categorical program for a number of years prior to 1977. Therefore, this amendment was not the institution of a new initiative, but an attempt to secure more consistent state funding by including the gifted program in the definition of basic education. It was assumed by all observers that basic education would be fully funded by the state in future years.

Table 27 presents the descriptions, means and standard deviations of the variables that were used in the analyses of the votes in the state of Washington. For the most part these variables were the same as used in the analyses presented for Michigan and Missouri. The only differences for the state of Washington included the following: there was one and only one indicator of the strength of teacher organizations, the Washington Education Association (WEA) membership concentration indicator; there were two indicators of economic self-interest, change in state aid per capita and change in total expenditures per capita; and there were a substantial number of cues given on each of the votes analyzed.

The results of the five individual theoretical models are presented in Table 28 on the vote for the inclusion of the gifted education programs in the definition of basic education. The results for the economic self-interest indicators were mixed. Change in total expenditures per capita was not significantly related to the vote; while the change in aid per capita indicator was strongly related to the vote and carried a negative sign indicating that low change-in-aid districts were in favor of the amendment. The economic self-interest model correctly classified 67.8 percent of the voting legislators. Median family income was not effective in distinguishing between those who voted in favor of the gifted education programs and those who voted against. Of the interest group indicators, only two were even moderately related to the vote, the concentration of poverty children

Table 27

WASHINGTON HOUSE, 1977
House Bill 960

List of Variables

Description	Mean	Standard Deviation
Political party affiliation of the legislator (1 = Democrat; 0 = Republican)	.63	.48
A measure of constituency influence indicating differences among legislative districts along a rural to urban dimension (positive values indicate urban interests)	-.00	.98
A measure of constituency influence indicating differences among districts along a desire for public services dimension (positive values indicate more of a desire for public services)	-.00	.98
Number of AFDC recipients per 1,000 population in the legislative district	27.78	5.38
Percent of population in the legislative district employed in manufacturing (blue collar indicator)	26.69	8.62
Percent of population in the legislative district employed in wholesale/retail trades (small business indicator)	30.42	5.20
Median family income in the legislative district	10,402.22	1250.99
Number of years of legislative service of the legislator	5.68	5.61
Age of the legislator at the time of voting	46.32	11.64
Membership of the legislator on the Education Committee (1 = member; 0 = nonmember)	.17	.38
Membership of the legislator on the Appropriations Committee (1 = member; 0 = nonmember)	.26	.44
Leadership score of the legislator (increasing positive values indicate higher levels of policy leadership)	.21	.40
Per capita change in state aid to schools in the legislative district	63.41	14.15
Per capita change in total school expenditures between 1977 and 1979	86.85	21.76
Greater than 5 percent decline in FTE enrollment between 1977 and 1979 in the legislative district	.34	.47

Table 27 (Continued)

WASHINGTON HOUSE, 1977
House Bill 960

List of Variables

Description	Mean	Standard Deviation
Greater than 5 percent growth in FTE enrollment between 1977 and 1979 in the legislative district	.08	.27
The dollar amount on the special levy election ballot in 1977, averaged for all school districts in the legislative district (taxpayer interest group indicator)	9.02	1.70
Number of Washington Education Association members per 1,000 population in the legislative district	10.33	1.44
CUES: (if cue is given, indicator = 1)		
Democratic leadership cue for the vote on gifted education programs	.58	.49
Republican leadership cue for the vote on gifted education programs	.32	.47
Democratic Education Committee cue for the vote on gifted education programs	.53	.50
Republican Education Committee cue for the vote on gifted education programs	.29	.45
Democratic Appropriations Committee cue for the vote on gifted education programs	.45	.50
Republican Appropriations Committee cue for the vote on gifted education programs	.27	.44
Democratic leadership cue for the vote on the inclusion of the URRD programs	.58	.49
Republican leadership cue for the vote on the inclusion of the URRD programs	.32	.47
Democratic Education Committee cue for the vote on the inclusion of the URRD programs	.53	.50
Democratic Appropriations Committee cue for the vote on the inclusion of the URRD programs	.45	.50

Table 27 (Continued)

WASHINGTON HOUSE, 1977
House Bill 960

List of Variables

Description	Mean	Standard Deviation
Republican Appropriations Committee cue for the vote on the inclusion of the URRD programs	.27	.44
Democratic leadership cue for the vote on the declining and increasing enrollment adjustments	.58	.49
Republican leadership cue for the vote on the declining and increasing enrollment adjustments	.32	.47
Republican Education Committee cue for the vote on the declining and increasing enrollment adjustments	.29	.45
Democratic Appropriations Committee cue for the vote on the declining and increasing enrollment adjustments	.45	.50
Republican Appropriations Committee cue for the vote on the declining and increasing enrollment adjustments	.27	.44
Democratic leadership cue for the vote on the original House version of HB 960	.58	.49
Democratic Education Committee cue for the vote on the original House version of HB 960	.53	.50
Republican Education Committee cue for the vote on the original House version of HB 960	.29	.45
Democratic Appropriations Committee cue for the vote on the original House version of HB 960	.45	.50
Democratic leadership cue for the vote on the Special Levy Limitation Bill	.58	.49
Democratic Appropriations Committee cue for the vote on the Special Levy Limitation Bill	.45	.50

Table 28

WASHINGTON HOUSE, 1977
House Bill 960

The Chandler, Lee, Dunlap amendment proposed the inclusion of handicapped education in the definition of basic education.

	Voting Behavior Models[‡]				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					-4.0859***
Change in state aid	-0.0554***				
Change in total expenditures	0.0092				
FTE decline greater than 5 percent					
FTE increase greater than 5 percent					
Dollar amount on special levy election ballot, 1977			NE		
Rural/urban lifestyle				-0.0795	
Desire for public services				0.4325*	
Number of AFDC recipients			-0.0752**		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			0.0685*		
Number of Washington Education Association members			NE		
Median family income		0.0000			
Intercept	2.2722	-1.3652	-0.4094	-0.4228	2.2335
-2 log likelihood	113.83	120.86	116.49	118.09	66.54
Model chi square	7.31	0.29	4.65	3.05	54.60
Percent correctly classified	67.8	60.0	61.1	63.3	87.8
Number of observations	90	90	90	90	90

[‡] The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \le .05$;   ** if $p > .05$ and $p \le .10$;   * if $p > .10$ and $p \le .30$;   NE = Not Entered.

indicator and the small business indicator. The poverty concentration indicator carried a negative sign while the small business indicator carried a positive sign. In the constituency influence model, it was found that the two factors were not influencial in the determination of the vote. Political party influence, on the other hand, was found to be strongly related to the vote on gifted education programs, correctly classifying 87.8 percent of the legislators who voted on the amendment. Democrats voted against the gifted education programs being included in the definition of basic education.

The results of the combined equations are presented in Table 29. In the first combined equation where the economic self-interest variables are left out and the political party indicator is used, political party and median family income were found to be strongly related to the vote on the amendment. The Democrats were against the adoption of the amendment while high levels of median family income were related to votes in favor of it. This combined equation correctly classified 87.8 percent of the voting legislators. In the second combined equation, there was a shift in the variables that were entered into the equation. Political party influence was represented by the inclusion of two cues from the Republican party. However, the influence of median family income was replaced by the concentration of poverty indicator and the change in state aid per capita indicator. Each of the four indicators that were entered was strongly related to the vote on the amendment. The Republican leadership cue and the cue from the Republicans on the Education Committee were both

Table 29

WASHINGTON HOUSE, 1977
House Bill 960

The Chandler, Lee, Dunlap amendment proposed the inclusion of handicapped education in the definition of basic education.

	Voting Behavior Models§		
	First Combined	Second Combined	Personal
Party affiliation	-8.8174***		-4.3356***
Change in state aid		-0.1726***	
Change in total expenditures		NE	
FTE decline greater than 5 percent			
FTE increase greater than 5 percent			
Dollar amount on special levy election ballot, 1977	NE	NE	
Rural/urban lifestyle	NE	NE	
Desire for public services	NE	NE	
Number of AFDC recipients	NE	-0.3286***	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	NE	NE	
Number of Washington Education Association members	NE	NE	
Median family income	0.0019***	NE	
Years of service in legislature			NE
Age of legislator			NE
Member: Education Committee			NE
Member: Appropriations Committee			1.3376**
Leadership score			-2.0938*

Table 29 (Continued)

WASHINGTON HOUSE, 1977
House Bill 960

The Chandler, Lee, Dunlap amendment proposed the inclusion of handicapped education in the definition of basic education.

	Voting Behavior Models#		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		NE	
Republican leadership		5.6910***	
Democratic Education Committee		NE	
Republican Education Committee		3.4076***	
Democratic Appropriations Committee		NE	
Republican Appropriations Committee		NE	
Intercept	-15.4561	16.3867	2.3977
-2 log likelihood	47.46	46.55	61.74
Model chi square	73.68	74.59	58.38
Percent correctly classified	87.8	88.9	87.6
Number of observations	90	90	89

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

positively related to the vote, while the concentration of poverty indicator and the change in state aid per capita were negatively related to the vote. These four indicators correctly classified 88.9 percent of the vote on the amendment.

The final equation in Table 29 examined the relationships between the personal characteristics of the legislator and his/her vote on the gifted programs. As was found previously, the political party indicator was very strongly related to the vote, with Democrats being more likely to vote against the amendment. However, membership on the Appropriations Committee and the leadership index for the school finance reform activity also were entered in the personal characteristics equation. Membership on the Appropriations Committee was only moderately related to the vote, with members of the Committee more likely to vote in favor of the inclusion of the gifted programs in the definition of basic education. Those who were characterized as policy leaders in the finance reform effort in 1977 were only weakly related to the vote but were more likely to vote against the amendment. The equation correctly classified 87.6 percent of the legislators.

From the analyses of the individual voting theories it seems that the economic self-interest indicator (change in aid per capita) and the political party indicator were the two theoretical concerns uppermost in the minds of those voting on the amendment. Turning to the combined analyses, it is clear that the Republican party was in favor of securing a more stable flow of state aid to school districts for gifted education programs. It also is clear that the districts in the state of Washington in favor of the amendment were districts that did not do very well under the proposed definition of basic education (as measured by change in aid or median family income). It would be difficult to say whether the appearance of the poverty concentration indicator reflected a concern for these children, or was a measure that higher concentrations of poverty families live in Democratic districts.

The Vote on the Inclusion of the URRD Programs

The second amendment to expand the definition of basic education was on the inclusion of the Urban, Rural, Racial and Disadvantaged (URRD) education programs (defeated: Yes 25, No 59). As was the case with the gifted education program, the URRD programs had been part of the state system of categorical programs prior to 1977. Once again the advantage of including the URRD programs in the definition of basic education was to insure the stability of its funding since everyone believed that the definition of basic education would be fully funded in order for the school finance system to be found constitutional. The other factor to be noted is that the revenue picture for the state of Washington in 1977 was so good that, even if these programs were not added to the definition of basic education, there was no immediate threat to the programs' existence since there was enough money to continue funding them on a categorical basis. As a consequence, votes against the amendment, called the Douthwaite Amendment, were not votes that threatened the existence of the programs.

Table 30 presents the results of the analysis of the

Table 30

WASHINGTON HOUSE, 1977
House Bill 960

The Douthwaite Amendment proposed the inclusion of URRD programs in the definition of basic education.

	Voting Behavior Models#				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					-1.3437***
Change in state aid	-0.0060				
Change in total expenditures	-0.0522***				
FTE decline greater than 5 percent					
FTE increase greater than 5 percent					
Dollar amount on special levy election ballot, 1977			0.3012*		
Rural/urban lifestyle				0.7713***	
Desire for public services				0.5480*	
Number of AFDC recipients			-0.1361***		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			NE		
Number of Washington Education Association members			-0.4316**		
Median family income		0.0007***			
Intercept	3.7683	-8.6918	4.3594	-1.1928	0.0000
-2 log likelihood	86.83	91.11	86.95	83.40	95.18
Model chi square	15.45	11.17	15.34	18.88	7.10
Percent correctly classified	76.2	70.2	76.2	76.2	70.2
Number of observations	84	84	84	84	84

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

individual voting behavior models on the vote on the addition of the URRD programs. In the case of the economic self-interest indicators, the results show that the change in state aid per capita measure was not related to the vote, although the change in total expenditures per capita measure was strongly and positively related to the vote. The change in total expenditures per capita correctly classified 76.2 percent of the legislators voting on the amendment. The median family income indicator also was found to be strongly related to the vote on the URRD programs. As the median family income of the district increased, the legislator was much more likely to vote in favor of the inclusion of the URRD programs in the definition of basic education. Of the five interest group indicators three contributed to the explanation of the vote on the Douthwaite Amendment. The concentration of poor children measure was strongly and negatively related to the vote on the inclusion of these programs. The WEA membership indicator was moderately related to the vote but also carried a negative sign showing that higher concentrations of WEA members were most likely found in districts whose representatives voted against the amendment. In addition, the indicator of high tax effort was weakly related to the vote and carried a positive sign suggesting that high tax effort districts were in favor of including the URRD programs in the definition of basic education. The three variables correctly classified 76.2 percent of the legislators voting on the amendment.

Both indicators of the influence of constituency were related to the vote on the URRD programs. The rural/urban lifestyle indicator was strongly related to the vote and carried a positive sign indicating that urban interests were in favor of the inclusion of these programs. The desire for public services indicator was only weakly related to the vote, though a higher desire for public services did increase the likelihood of a vote in favor of adding the URRD programs to the definition of basic education. These two indicators correctly classified 76.2 percent of the voting legislators. The political party indicator also was strongly related to the vote on the amendment with the Democrats being much more likely to vote against the amendment than Republicans.

The combined equations for the vote analysis of the URRD program amendment are presented in Table 31. In the first equation the rural/urban lifestyle indicator, the political party indicator and the poverty concentration indicator were all related to the vote. The rural/urban indicator and political party were strongly related to the vote, although their coefficients carried opposite signs suggesting that urban areas were very much in favor of the inclusion of the URRD programs while the Democratic party tended to be against it. The concentration of poverty factor was weakly related to the vote and carried a negative sign indicating that higher concentrations of poverty children were found in areas that voted against the amendment. This equation correctly classified 76.2 percent of those legislators voting on the amendment. The second combined equation was a replica of the first with the urban/rural lifestyle indicator and the cue from the Democratic leadership being strongly related to the vote and

Table 31

WASHINGTON HOUSE, 1977
House Bill 960

The Douthwaite Amendment proposed the inclusion of URRD programs in the definition of basic education.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	-2.3079***		-1.4700***
Change in state aid		NE	
Change in total expenditures		NE	
FTE decline greater than 5 percent			
FTE increase greater than 5 percent			
Dollar amount on special levy election ballot, 1977	NE	NE	
Rural/urban lifestyle	1.5188***	1.4403***	
Desire for public services	NE	NE	
Number of AFDC recipients	-0.0957*	-0.0871*	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	NE	NE	
Number of Washington Education Association members	NE	NE	
Median family income	NE	NE	
Years of service in legislature			NE
Age of legislator			NE
Member: Education Committee			-1.1424*
Member: Appropriations Committee			NE
Leadership score			NE

Table 31 (Continued)

WASHINGTON HOUSE, 1977
House Bill 960

The Douthwaite Amendment proposed the inclusion of URRD programs in the definition of basic education.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		-1.9271***	
Republican leadership		NE	
Democratic Education Committee		NE	
Republican Education Committee			
Democratic Appropriations Committee		NE	
Republican Appropriations Committee		NE	
Intercept	2.8103	2.2525	0.2964
-2 log likelihood	70.42	72.99	91.91
Model chi square	31.86	29.30	9.66
Percent correctly classified	76.2	77.4	71.1
Number of observations	84	84	83

---

‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

carrying opposite signs. As before, the concentration of poverty children factor was weakly related to the vote and carried a negative sign. The second combined equation correctly classified 77.4 percent of the voting legislators.

The results of the final equation presented in Table 31 indicate the influence of the personal characteristics of the legislator. As can be seen, only two characteristics were entered into the equation, the political party and the membership on the Education Committee. Both of these variables were negatively related to the vote with Democrats and members of the Education Committee being against the inclusion of the URRD programs in the definition of basic education. Political party was strongly related to the vote while membership on the Education Committee was only weakly related to it. The equation correctly classified only 71.1 percent of the legislators voting on the Douthwaite Amendment.

From the examination of each of the five individual voting behavior theories, it appears that constituency influence, especially the rural/urban lifestyle indicator, and interest group influence, especially the concentration of poverty indicator, were the two areas which made the greatest contribution toward understanding the vote on the amendment. In the combined equations, the constituency indicator (rural/urban lifestyle), political party indicator, and poverty concentration indicator were the major factors influencing the decisions of legislators on this vote. What is impressive is that the Democratic party appeared to be making a concerted effort to limit the definition of basic education and voted against programs that would have aided the natural constituency of the party.

The Vote on the Declining and Increasing Enrollment Adjustments

The third attempt to expand the definition of basic education was known as the Taller and Fancher amendment (defeated: Yes 40, No 48). The amendment was designed to compensate the school districts for declining or increasing FTE enrollments. Declining enrollment was computed at 50 percent of the actual FTE loss while increasing enrollments were computed at 20 percent of the actual FTE increase. Unlike the previous two amendments, the Taller and Fancher Amendment was not a modification of the handicapped education act to be included in the definition of basic education. It was an amendment to the section of the bill that determined the distribution of state equalization funds for certificated and classified personnel based on FTE student ratios. On its face the amendment would have been a boon for school districts experiencing substantial declines in FTE enrollment and would have been somewhat of a punishment for districts experiencing increases in FTE enrollment. Even though the modification of the bill by this amendment was different from the previous two, the enrollment adjustment to the definition of basic education also was defeated.

The results of the individual voting behavior theories are presented in Table 32 for the Taller and Fancher amendment. It was difficult to decide where to place the two indicators of the extremes of the change in FTE enrollments. Were they indicators of economic self-interest or of special group interest? Due to

Table 32

WASHINGTON HOUSE, 1977
House Bill 960

The Taller and Fancher amendment compensates declining enrollment at 50 percent of FTE loss and compensates increasing enrollment at 20 percent of FTE increases.

	Voting Behavior Models#				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					-4.8318***
Change in state aid	-0.0527**				
Change in total expenditures	-0.0245*				
FTE decline greater than 5 percent	0.3546		1.2898***		
FTE increase greater than 5 percent	-0.3870		-1.5066*		
Dollar amount on special levy election ballot, 1977			-0.4319***		
Rural/urban lifestyle				-0.0957	
Desire for public services				0.2112	
Number of AFDC recipients			NE		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			0.0947**		
Number of Washington Education Association members			NE		
Median family income		-0.0001			
Intercept	0.9728	1.4313	0.5540	-0.1442	3.4011
-2 log likelihood	115.00	120.80	108.05	120.99	64.75
Model chi square	6.59	0.78	13.54	0.59	56.83
Percent correctly classified	62.5	59.1	68.2	54.5	86.4
Number of observations	88	88	88	88	88

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

this confusion, the two variables were entered both in the economic self-interest equation and in the interest group equation. In the economic self-interest equation, somewhat surprisingly the only variable strongly related to the vote was the change in state aid per capita indicator. Both the indicators of extreme change in FTE enrollments and the change in total expenditures per capita were not significantly related to the vote. Median family income also was unrelated to the vote. Of the seven interest group indicators, four were entered in the equation. Two of those, the high tax effort districts and the declining FTE enrollment districts were strongly related to the vote, with the high tax effort districts tending to vote against the measure and the declining enrollment districts tending to vote in favor of it. The small business indicator was moderately related to the vote, with districts having high percentages of workers in wholesale and retail industries tending to vote in favor of the amendment. The increasing enrollment indicator was weakly related to the vote on the amendment with school districts experiencing rising enrollments tending to vote against the measure.

The indicators of the constituency influence, rural/urban lifestyle and desire for public services, were not related to the vote on the Taller and Fancher amendment. And finally, the political party indicator was strongly related to the vote with Democrats tending to vote against the measure. The political party indicator correctly classified 86.4 percent of those voting on the amendment.

In the first combined equation, see Table 33, the two indicators included were the political party and declining enrollment. The political party variable was strongly related to the vote with the Democrats much more likely than the Republicans to vote against the bill. The declining FTE enrollment indicator was only moderately related to the vote; however, districts experiencing large declines in FTE enrollments were more likely than others to vote in favor of the amendment. The first combined equation correctly classified 86.4 percent of those voting on the amendment. The second combined equation was related to the first, given the relationships that were observed in the individual theory analysis. When the political party indicator was dropped, two cues, one from the Republican leadership and the other from the Republican Education Committee, took their place. Both cues were strongly related to the vote and showed that Republicans were much more likely to vote in favor of the amendment than Democrats. In addition, the change in state aid per capita measure replaced the declining FTE enrollment indicator in the second combined equation. The change in aid indicator was strongly related to the vote, with high changes in state aid per capita were most likely to yield votes against the amendment. The second combined equation correctly classified 86.4 percent of the vote on the enrollment adjustment amendment.

The last equation included on Table 33 shows the analysis of the influence of personal characteristics on the legislators' votes on the amendment. Once again, political party was the dominant characteristic in the equation, i.e., strongly related to

Table 33

WASHINGTON HOUSE, 1977
House Bill 960

The Taller and Fancher amendment compensates declining enrollment at 50 percent of FTE loss and compensates increasing enrollment at 20 percent of FTE increases.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	-5.0217***		-4.8491***
Change in state aid		-0.0660***	
Change in total expenditures		NE	
FTE decline greater than 5 percent	1.0845*	NE	
FTE increase greater than 5 percent	NE	NE	
Dollar amount on special levy election ballot, 1977	NE		
Rural/urban lifestyle	NE	NE	
Desire for public services	NE	NE	
Number of AFDC recipients	NE	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	NE	NE	
Number of Washington Education Association members	NE	NE	
Median family income	NE	NE	
Years of service in legislature			NE
Age of legislator			NE
Member: Education Committee			NE
Member: Appropriations Committee			NE
Leadership score			-1.0681*

Table 33 (Continued)

WASHINGTON HOUSE, 1977
House Bill 960

The Taller and Fancher amendment compensates declining enrollment at 50 percent of FTE loss and compensates increasing enrollment at 20 percent of FTE increases.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		NE	
Republican leadership		3.8143***	
Democratic Education Committee			
Republican Education Committee		2.4193***	
Democratic Appropriations Committee		NE	
Republican Appropriations Committee		NE	
Intercept	3.1278	2.6895	3.6409
-2 log likelihood	62.05	63.00	62.81
Model chi square	59.54	58.59	57.51
Percent correctly classified	86.4	86.4	86.2
Number of observations	88	88	87

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

the vote. In addition, the leadership index also was entered in the equation and although its relationship to the vote was very weak, its coefficient did show that leaders of the school finance reform legislation were against the amendment. The personal characteristics equation correctly classified 86.2 percent of the legislators voting on the amendment.

From the results presented in the individual theory analyses, it appears that interest groups and the political party are most helpful in understanding the vote on the Taller and Fancher amendment. Further, interesting results were found in the analysis of the FTE change indicators. In the interest group model -- having controlled for tax effort and small business concerns -- the declining FTE indicator and the increasing FTE indicator performed exactly as would have been expected given the impact of the amendment on their districts. However, when these two indicators were placed in the economic self-interest equation their influence was nullified by the change in state aid per capita indicator. In the examination of the combined equations, the first is easier to interpret than the second. The Democrats were attempting to keep intact their definition of basic education and apparently did not want any changes tacked onto it. On the other hand, many representatives from declining enrollment districts could not turn their heads and follow the party line, and a few of them voted according to the economic interest of their school districts.

The Vote on the Original House Version of HB 960

The original House version of HB 960 (passed: Yes 64, No 33) was in many ways quite similar to the version produced by the Senate, and the final version that was adopted and passed into law. However, there were a few important differences. The intent section stated that the primary responsibility for children and their education rests with the families throughout the state; it assured school districts adequate and equal financial aid without reliance on special levies; it affirmed to the court that the act complied with Article 9 Section 1 of the state constitution because it defined basic education; and it declared that the goals of the program were to provide children with the opportunity to acquire knowledge and skills that would assist them in the course of becoming productive citizens. Though the intent and goals were modified later, their essence was preserved in the law that was ultimately enacted.

The House version defined minimum school year, minimum school day, certificated employees, full-time equivalent students, required courses, elective courses and total program hours. However, the pupil-teacher ratios that "drive" the funding of the basic education definition were not included in the original House version of the bill. These were added in later versions by the Senate and in the Conference. In addition, the original House bill mandated certain aspects of the use of local revenues and it included restrictions on the use of special levy funds for salaries and basic education. This version of the bill was characterized as the one that best satisfied the majority of the members of the House.

Table 34 presents results of the five individual voting behavior theories for the original House bill. The economic self-interest indicators -- change in state aid per capita and change in total expenditures per capita -- were both related to the vote. The change in state aid per capita indicator was strongly related to the vote with large increases in aid associated with votes in favor of the passage. In contrast, change in total expenditures per capita was only weakly related to the vote, and large changes in expenditures were associated with votes against the bill. The economic self-interest equation correctly classified 68.0 percent of those voting on the bill. Median family income was not helpful in explaining the vote on the bill. The interest group indicators also were not helpful in explaining variations in the vote, with none of the indicators being entered into the equation. The results for the indicators for constituency influence were mixed, with the desire for public services factor being strongly related to the vote and negative in sign, while the rural/urban lifestyle factor was completely unrelated to the vote. Finally the political party indicator was very strongly related to the vote, with Democrats tending to vote in favor of the legislation. The political party indicator correctly classified 78.4 percent of the legislators voting on the original House version of the bill.

In the first combined equation in Table 35 just three variables were entered: the political party, the desire for

Table 34

WASHINGTON HOUSE, 1977
House Bill 960

The vote on the perfected House version of HB 960.

	Voting Behavior Models‡				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					2.4471***
Change in state aid	0.0736***				
Change in total expenditures	-0.0203*				
FTE decline greater than 5 percent					
FTE increase greater than 5 percent					
Dollar amount on special levy election ballot, 1977			NE		
Rural/urban lifestyle				0.1755	
Desire for public services				-0.6422***	
Number of AFDC recipients			NE		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			NE		
Number of Washington Education Association members			NE		
Median family income		-0.0002*			
Intercept	-2.1284	3.0096	0.6623	0.7088	-0.6931
-2 log likelihood	115.93	122.72	124.39	118.32	96.88
Model chi square	8.46	1.67	-	6.07	27.51
Percent correctly classified	68.0	66.0	66.0	63.9	78.4
Number of observations	97	97	97	97	97

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \le .05$; ** if $p > .05$ and $p \le .10$; * if $p > .10$ and $p \le .30$; NE = Not Entered.

Table 35

WASHINGTON HOUSE, 1977
House Bill 960

The vote on the perfected House version of H.B. 960.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	3.1631***		2.6483***
Change in state aid		NE	
Change in total expenditures		NE	
FTE decline greater than 5 percent			
FTE increase greater than 5 percent			
Dollar amount on special levy election ballot, 1977	NE	NE	
Rural/urban lifestyle	NE	NE	
Desire for public services	-1.2011***	-1.0972***	
Number of AFDC recipients	-0.0738*	-0.0834*	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	NE	NE	
Number of Washington Education Association members	NE	NE	
Median family income	NE	NE	
Years of service in legislature			0.1446***
Age of legislator			NE
Member: Education Committee			NE
Member: Appropriations Committee			NE
Leadership score			NE

Table 35 (Continued)

WASHINGTON HOUSE, 1977
House Bill 960

The vote on the perfected House version of H.B. 960.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		1.6633***	
Republican leadership			
Democratic Education Committee		NE	
Republican Education Committee		NE	
Democratic Appropriations Committee		1.4454***	
Republican Appropriations Committee			
Intercept	1.0985	1.7051	-1.4445
-2 log likelihood	83.57	89.09	87.65
Model chi square	40.81	35.29	33.75
Percent correctly classified	81.4	78.4	81.1
Number of observations	97	97	95

---

‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$;
NE = Not Entered.

public services and the concentration of poverty children indicators. The first two, political party and desire for public services, were strongly related to the vote. Democrats tended to be in favor of this version of the bill while districts with higher taste for public services were against it. The concentration of poverty children indicator was only weakly related to the vote and carried a negative sign. The first combined equation correctly classified 81.4 percent of those voting. The second combined equation closely resembled the first with two Democratic cues, one from the leadership and one from the Appropriations Committee replacing the political party indicator. The desire for public services indicator and the concentration of poor children indicator were included as they had been before. All variables retained the sign that they were given in the previous equation. The second combined equation correctly classified 78.4 percent of those voting on this version of the bill.

The personal characteristics equation also was interesting since both the political party indicator and the tenure of the individual legislator were found to be strongly related to the vote on the original House version of the bill. The signs on both of these indicators were positive lending even more credence to the interpretation that the vote's intent was to continue to develop school finance legislation under the rules of the past, which required that revenue distributing mechanisms be eliminated from the substantive committee bills.

In summary, political party was obviously a strong influence on the vote, but in addition to party, the economic self-interest indicator (change in state aid per capita) and the constituency influence indicator (the desire for public services) were strongly related to the vote. For the combined equations, political party and the constituency influence (desire for public services) were the two issues that determined positions on the vote. That these two indicators carry an opposite sign reflects the debate on whether to keep the pupil-teacher ratios or to leave that decision in the hands of the Appropriations Committee. The Democrats were in favor of leaving that decision with the Appropriations Committee, while those who desired a guaranteed level of state funding were against the bill because the "drivers" were not included.

The Vote on the Senate Amendments to HB 960

The vote on HB 960 as amended by the Senate was taken in the House of Representatives (defeated: Yes 42, No 52) after the Senate reviewed and modified the original House version of the bill. The difference between the two bills can be broken down into three major categories. The first concerns a series of minor changes that the Senate incorporated into the bill regarding the definition of basic education. The second concerned the inclusion of the pupil-teacher ratios as the "driving" mechanism for distributing aid to local school districts. The third major change was the deletion of restrictions on the use of special levy revenues for teacher salaries.

The minor changes in definitions introduced by the Senate version deleted the minimum school day requirements and added the definitions of basic skills, work skills and total program hour offerings. The Senate then deleted the sections listing required and elective courses and replaced them with percentages of courses divided between basic skills, work skills and electives. All elective courses were to be determined by the local school district. In addition, the Senate changed the House version's required number of days at X hours per day to a total number of hours required.

The pupil-teacher ratios included in the Senate version of the bill were 50 certificated staff per 1000 FTE students and one classified staff to every 60 FTE students. All districts were to work to attain these ratios by the 1980-81 school year. In the Senate version of the bill the special levy limitations were separated out from the definition of basic education. The House Revenue Committee was given the task of devising a special levy limitation bill that eventually was drafted as HB 1086.

The results for the five individual voting behavior theories are presented in Table 36. The economic self-interest indicators did not do as good a job in explaining the vote on the Senate amended version of HB 960 as they had done in the original House version. Change in total expenditures per capita was unrelated to this vote, and the change in state aid per capita indicator was only moderately related to the vote and carried a negative sign. Median family income also provided no clues as to why legislators voted as they had. Of the interest group indicators, three were entered into the equation: the high-tax effort, the WEA

Table 36

WASHINGTON HOUSE, 1977
House Bill 960

The vote in the House to concur in the Senate version of HB 960.

	Voting Behavior Models‡				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					Infinite
Change in state aid	-0.0479**				
Change in total expenditures	0.0099				
FTE decline greater than 5 percent					
FTE increase greater than 5 percent					
Dollar amount on special levy election ballot, 1977			-0.2547**		
Rural/urban lifestyle				-0.0174	
Desire for public services				0.1087	
Number of AFDC recipients			NE		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			0.0672*		
Number of Washington Education Association members			-0.3179*		
Median family income		-0.0001			
Intercept	1.9245	1.2921	3.2965	-0.2126	
-2 log likelihood	123.91	128.50	122.30	129.03	
Model chi square	5.34	0.74	6.94	0.22	
Percent correctly classified	59.6	64.9	60.6	55.3	
Number of observations	94	94	94	94	

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

concentration and the small business indicators. High property tax effort was moderately related, being associated with votes against the measure. The WEA membership indicator and the small business indicator were only weakly related to the vote, with the WEA membership indicator carrying a negative sign and the small business indicator carrying a positive sign. The indicators of constituency influence were even weaker. Neither the rural/urban lifestyle indicator nor the desire for public services indicator were at all related to the vote. The political party indicator, on the other hand, was very strongly related to the vote with Democrats voting against the Senate version of HB 960. The political party indicator alone correctly classified 91.5 percent of the votes.

Of the five voting behavior theories it is clear that the vote on the Senate version of HB 960 was defeated on a purely political party basis. At least two reasons are possible for the Democrats' hard line position against the Senate version of the bill. First, there was a lingering feeling that the pupil-teacher funding mechanism should be completely left out of a substantive bill in education policy. A second reason concerned the desire to take this bill to conference, and this was the only vote on which the need for a House-Senate Conference would be decided. The Conference would allow the House one last chance to influence the outcome on this important piece of legislation. These two reasons were the cause for the vote taking on such a partisan cast in the development of a piece of legislation characterized as being non-partisan.

The Vote on the Special Levy Limitation Bill

The final vote analyzed in the state of Washington is HB 1086, the Special Levy Limitation Bill (passed: Yes 64, No 26). This bill was targeted specifically at the problem of heavy reliance on special levies for the yearly operation of local school districts. With the state defining and fully funding basic education, the pressure on school districts to use special levy elections to raise large amounts of revenue was removed. However, in order to insure that the reliance on special levies would never again become so great, the Washington legislature thought it appropriate to enact HB 1086. The provisions of the Special Levy Limitation bill were as follows: a special school levy could be passed for one or two years; for approved 1977 special levies collectable in 1978, any extra and unanticipated state funds should be used to reduce the size of the special levy; special levies collectible in 1979 and thereafter must be limited to ten percent of the prior year's actual total state aid allocation or the allocation that the district was entitled to, whichever was greater; and special excess levies could not be used for school district employee salaries except in districts receiving the minimum state budget increase or in districts below the statewide average compensation for employees. In addition, HB 1086 did not cancel contracts negotiated prior to the enactment of the bill and therefore such agreements could continue in force until they expired. As was stated earlier, HB 1086 was developed in the House Revenue Committee after the decision was made that it was not appropriate to accomplish the levy limitation through the vehicle of the basic education bill, HB 960. As a result, HB 1086 was developed after the House-Senate Conference, and moved quickly through the legislature.

The results of the analyses are presented in Table 37. Of the economic self-interest indicators only change in state aid per capita was weakly related to the vote, with districts experiencing larger increases in state aid being mildly in favor of the Special Levy Limitation bill. The economic self-interest model correctly classified 71.1 percent of those voting. The median family income indicator was not related to the vote. The interest group indicators did not satisfactorily explain the vote. Of these indicators, only two, the concentration of poverty children and the small business indicators, were entered into the equation. Both showed only weak relationships to the vote with districts having higher concentrations of poverty children tending to vote in favor of the Levy Limitation bill, and districts having higher concentrations of persons employed in the wholesale and retail industries most likely to vote against the bill. The influence of constituency indicators, urban/rural lifestyle and desire for public services, also were unrelated to the vote on the special levy limitation. The political party indicator on the other hand was strongly related to the vote, such that Democrats were much more likely than Republicans to vote in favor of the special levy limitation. However, the political party indicator correctly classified only 76.7 percent of the votes on the bill.

The combined equations are presented in Table 38, although they do not shed much additional light. In the first combined

Table 37

WASHINGTON HOUSE, 1977
House Bill 1086

The vote on the Special Levy Limitation Bill, HB 1086.

	Voting Behavior Models‡				
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party
Party affiliation					2.2714***
Change in state aid	0.0333*				
Change in total expenditures	-0.0149				
FTE decline greater than 5 percent					
FTE increase greater than 5 percent					
Dollar amount on special levy election ballot, 1977			NE		
Rural/urban lifestyle				0.3270*	
Desire for public services				-0.2861	
Number of AFDC recipients			0.0668*		
Percent employed in manufacturing (blue collar)			NE		
Percent employed in wholesale/retail trades (small business)			-0.0556*		
Number of Washington Educa[illegible] Association members			NE		
Median family income		0.0001			
Intercept	0.1013	-0.3492	0.7976	0.9162	-0.3053
-2 log likelihood	106.66	107.77	104.91	107.01	87.45
Model chi square	1.55	0.43	3.30	1.20	20.76
Percent correctly classified	71.1	71.1	68.9	71.1	76.7
Number of observations	90	90	90	90	90

---

‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$;   ** if $p > .05$ and $p \leq .10$;   * if $p > .10$ and $p \leq .30$;   NE = Not Entered.

Table 38

WASHINGTON HOUSE, 1977
House Bill 1086

The vote on the Special Levy Limitation Bill, HB 1086.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
Party affiliation	2.3075***		2.6492***
Change in state aid		NE	
Change in total expenditures		NE	
FTE decline greater than 5 percent			
FTE increase greater than 5 percent			
Dollar amount on special levy election ballot, 1977	NE	NE	
Rural/urban lifestyle	NE	NE	
Desire for public services	NE	NE	
Number of AFDC recipients	0.0620*	NE	
Percent employed in manufacturing (blue collar)	NE	NE	
Percent employed in wholesale/retail trades (small business)	NE	NE	
Number of Washington Education Association members	NE	NE	
Median family income	NE	NE	
Years of service in legislature			NE
Age of legislator			NE
Member: Education Committee			NE
Member: Appropriations Committee			NE
Leadership score			-1.1845**

Table 38 (Continued)

WASHINGTON HOUSE, 1977
House Bill 1086

The vote on the Special Levy Limitation Bill, HB 1086.

	Voting Behavior Models‡		
	First Combined	Second Combined	Personal
CUES:			
Democratic leadership		1.1947**	
Republican leadership			
Democratic Education Committee			
Republican Education Committee			
Democratic Appropriations Committee		1.2264**	
Republican Appropriations Committee			
Intercept	-2.0222	-0.0882	-0.1306
-2 log likelihood	85.63	90.72	79.67
Model chi square	22.57	17.49	25.36
Percent correctly classified	78.9	74.4	78.4
Number of observations	90	90	88

---

‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \le .05$; ** if $p > .05$ and $p \le .10$; * if $p > .10$ and $p \le .30$;
NE = Not Entered.

equation, only two variables were entered. The first, political party, was strongly related to the vote and the second, concentration of poverty children, was only weakly related to the vote. Both of these indicators carried a positive sign denoting that Democrats were in favor of the bill, as were areas that had higher concentrations of poverty children. The first combined equation correctly classified 78.9 percent of those voting on the bill. The second combined equation also had only two variables entered, the Democratic leadership cue and the Democratic Appropriations Committee cue. Both cues were moderately related to the vote and carried a positive sign. The second combined equation correctly classified only 74.4 percent of those voting.

The third set of results presented in Table 38 shows the influences of the personal characteristics on the vote on the Special Levy Limitation bill. Two variables were entered in the equation. The expectations for both being entered in the equation were quite high; however, the sign of one of the variables was not expected. The political party indicator was entered in the equation and was strongly related to the vote with Democrats favoring the bill. The second indicator entered was the leadership in the reform effort, and it was moderately related to the vote. However, the sign on this indicator was surprising because the policy leadership in the House was opposed to the passage of the Special Levy Limitation bill. The reason for the opposition was that the leadership in the House felt that the Special Levy Limitation bill was an unnecessary part of the reform effort in the state of Washington. The personal characteristics equation correctly classified 78.4 percent of those who voted on the bill.

Although political party was obviously a motivating influence in the Special Levy Limitation bill vote, its classification power was severely eroded in comparison to the vote on the Senate version of HB 960. Without party, no other indicators were related to the vote. The only conclusion on the HB 1086 vote was that consensus had been reached.

Summary

The most noteworthy influence was that of political party, especially on the votes to expand the definition of basic education. The Democratic party worked very hard to resist the expansion of the definition of basic education, even to the point of opposing some programs that would have assisted members of their natural constituency. The ability of legislators in Washington state to know the economic self-interest of their districts also was a striking feature found in the analysis. The legislators that deviated from the party line voted in the direction of the self-interest of the district.

VII. LEGISLATIVE LEADERSHIP IN SCHOOL FINANCE ISSUES

Another important aspect of legislative behavior is policy leadership. This phrase implies a key level of involvement of a particular legislator in the passage of a specific piece of legislation. In the present study there was an opportunity to examine factors that may determine the emergence of legislative leadership on school finance legislation. There were two steps in the analysis. The first was to identify the legislators who were actively involved in the passage of the school finance reform legislation. Once these legislators had been identified, the second step in the process was to determine whether there were any systematic relationships between the characteristics of those legislators or of their districts, and their level of leadership.

Unfortunately, guidance from the economics and political science literatures in this area is limited. Three studies were found that contributed to the understanding of legislator participation. The first of these was entitled The Lawmakers (1965) by James D. Barber. In his study of Connecticut state legislators, Barber used a combination of intensive personal interviews and a survey of the entire General Assembly to collect the information he analyzed. Barber identified two dimensions along which he classified the state legislators, the first was an active-passive scale and the second was a willingness to return to the legislature scale. The active-passive dimension depended on the character of the individual legislator but was measured by the number of bills introduced, comments in committee hearings and lines spoken on the floor of the Assembly. The willingness-to-return dimension was measured by the legislator's response to a direct question and tapped the legislator's feeling toward his/her membership in the legislative group.

Using these two dimensions to create a four-fold classification scheme, Barber painted a caricature of each classification. The two classifications based on high activity ratings were labeled the advertisers and the lawmakers. When interviewed, advertisers most often cited the usefulness of holding political office in relation to their present occupation in discussing why they made the decision to run for office. Lawmakers, on the other hand, devoted an unusual amount of energy to the formulation and production of legislation and did not seem to have any other motivation for being in the legislature.

A second study on the activity level of state legislators was by Douglas E. Mitchell, et al., entitled, Shaping Legislative Decisions (1981). The main focus of this study of policy makers in Arizona, California and Oregon centered on how they use social science research. However, the authors also try to take into account the personal orientation of individual legislators as measured by their significant reference groups, their inclination to compromise and their sources of authority. These gradations of "personal orientation" are often related to the level of activity associated with an individual legislator, and decision making on school finance matters often involves the assimilation of some social science research.

However, the best work in this area to date is a book by

Rosenthal and Fuhrman entitled, Legislative Educational Leadership in the States (1982). The authors employed the same identification methodology (reputational) as was used in the present study to identify the legislative educational policy leadership in the American states. Unfortunately, they were unable to tie the identified leadership to any specific policy legislation. They were, however, able to identify a series of characteristics pertaining to state legislative education leadership.

The authors found that the legislative education leadership is highly experienced, has stayed with education over time and is generally comprised of more highly tenured legislators. In connection with the legislative education leadership's manner of developing education policy, the authors found that members of the leadership devote considerable time and energy to policy efforts in education. However, the focus of the legislative education leadership has been mainly on fiscal matters via the money committees. The authors summarize by saying "education leadership devotes as much of its energy to the function of reviewing budgets and appropriating funds for education as it does to the function of making policy for education" (1981, p. 101). The present examination of issue leadership in state legislatures will focus primarily on the characteristics of those legislators who were active in the fight for passage of the school finance reform legislation in the three states.

Expectations for the Policy Leadership Analysis

Much that occurs in the average day in a legislator's life has little to do with anyone actively exercising leadership. For example, the vast majority of bills introduced in any legislative session are not referred for consideration to the appropriate legislative committee. These bills do not even get the opportunity to be voted down by the legislature as a whole; for the most part they are buried for lack of legislative interest. At the other end of the spectrum are a number of pieces of legislation that pass through the legislature by what could be described as an "assembly line" process. If the time is right, these bills move to enactment without requiring a great deal of leadership. However, neither of the above scenarios adequately depicts how major changes in school finance systems are accomplished. In cases of school finance reform, coalitions must be put together and compromises must be made. These activities require the presence of legislators who can understand the policy area, can respond to their constitutents and can barter with their fellow legislators. As a consequence, school finance reform legislation is an excellent area in which policy leadership can be identified and analyzed.

Although nearly 20 years separate the appearance of the Barber and Rosenthal and Furhman works, both charactertized those participating in policy leadership as being few in number, hard-working, most likely to be involved in committee work and most likely to obtain gratification from passing "quality" legislation. Rosenthal and Fuhrman further describe the leaders in education policy as being more experienced and more senior, serving on both the Education and Appropriations Committees. The results of the two studies are encouraging in two ways. First, there is no doubt that school finance legislation concentrates on fiscal questions, and requires a great deal of hard work to get a quality piece of legislation through a legislature. As a consequence, major school finance legislation is the type that needs and attracts strong policy leadership.

The other contribution of these two books concerns the expectations for the results of the current analysis. It is expected that members of the Education and Appropriations Committees of the legislature are the most likely to assume policy leadership positions on school finance reform legislation. In addition, it is expected that the tenure of the legislator also is positively related to the likelihood of assuming a policy leadership position on school finance reform issues. These propositions are directly tested below. Unfortunately, neither of the two studies focused upon the influence of the legislator's district on his or her propensity to provide policy leadership in a particular area. The current study examines whether or not characteristics of the district influence a legislator's decision to assume a leadership role.

What is used in the analysis as the measure of policy leadership is the average rating given to each legislator by the informants in the three states. The questions put to the informants were, "Which of the legislators were key (i.e., pivotal or central) to the passage of school finance reform legislation in this state?" and second, "Which of the legislators were important (although not "key") in the legislative process that led to the passage of the school finance reform legislation?" Four people provided ratings in Michigan, five in Missouri and six in Washington. The ratings of the informants in each state were then averaged. These average ratings on policy leadership were obtained for members of the House in each of the three states, and in addition, for senators in the state of Missouri. (It should be noted that ratings were obtained from informants who were outside the formal legislative process during enactment of the bill. senators and representatives were not asked to supply ratings.)

In order to insure that the overall rating was consistent across raters (i.e., informants) and was based on uniform criteria, a correlational analysis was performed in which the mean rating without a particular rater was correlated with the ratings given by that rater. If these correlations fell below .65, that rater was dropped from the computation of the average rating. As a tribute to the knowledge of the informants and the fact that they used a common "measuring stick," only one rater in one of the four settings was excluded from the computations of an overall rating. A list of the indicators used in the analysis along with their means and standard deviations are presented in Table 39. Ordinary least squares regression procedures were used to analyze the ratings of education policy leadership rather than logistic regression because the values of the ratings were not limited to zero or 1.

Table 39

LIST OF VARIABLES FOR LEADERSHIP ANALYSIS

	Michigan House, 1973		Missouri House, 1977		Washington House, 1977		Missouri Senate, 1977	
Variables	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Political party indicator (1 = Democrat; 0 = Republican)	.53	.50	.68	.46	.63	.48	.64	.48
Tenure in legislature	6.68	5.46	6.52	4.47	5.68	5.61	9.35	5.85
Age of legislator	47.39	11.46	45.65	11.07	46.32	11.64	49.10	9.05
Member of Education Committee (1 = member; 0 = nonmember)	.11	.32	.17	.37	.17	.38	.29	.46
Member of Appropriations Committee (1 = member, 0 = nonmember)	.16	.37	.20	.40	.26	.44	.29	.46
Rural/urban lifestyle	.00	.97	-.00	.95	-.00	.98	-.00	.99
Desire for public services	-.00	.99	-.00	.96	-.00	.98	-.00	.99
Median family income	11,113.38	1519.71	8969.69	2271.42	10,402.22	1250.99	8982.41	2198.89
Concentration of children receiving AFDC payments	53.41	21.77	43.82	35.00	27.78	5.38	43.80	33.68
Percent of workforce employed in manufacturing	38.58	8.11	28.87	7.17	26.69	8.62	28.81	5.30
Percent of workforce employed in wholesale and retail	25.90	3.82	30.59	4.83	30.42	5.20	30.58	4.04
Concentration of teachers Indicator(s)	10.22	1.07	6.89	4.39 (MSTA)	10.33	1.44	2.44	2.18 (NEA)
Equalized tax effort	24.17	3.01	2.94	.54	9.02	1.70	2.95	.50

The Results of the Analysis

The results of the analysis which related personal characteristics of the individual legislators to their leadership ratings are presented in Table 40. Even though the number of legislators ranged between a low of 29 in the Missouri Senate and a high of 152 in the Missouri House, the percent of the variation explained in the dependent variable (leadership rating) hovered consistently between 28.4 percent and 31.4 percent. The explanatory power of the five personal characteristics in the equation were quite consistent across the Michigan, Missouri and Washington Houses and in the Missouri Senate.

Three factors were absolutely consistent in their influence across the four settings. Membership on the Education Committee was by far the most strongly related factor associated with education policy leadership. As consistent in its influence, though not as strong, was membership on the Appropriations Committee, which was found to be substantially related to education policy leadership in each of the four settings. The third indicator consistent across all settings concerned political party -- which was not found to be related to education policy leadership in any setting.

The results of the analysis of the indicators for tenure in the legislature and age of the legislator were found to be mixed. The age of the legislator was related to the education policy leadership indicator only in the Washington House of Representatives. In this instance the sign of its coefficient was negative indicating that younger legislators were most likely to

Table 40

ANALYSIS OF LEADERSHIP ON SCHOOL FINANCE REFORM LEGISLATION USING PERSONAL CHARACTERISTICS#

Personal Characteristics	Michigan House (1973)	Missouri House (1977)	Washington House (1977)	Missouri Senate (1977)
Political Party Indicator	NE	NE	NE	NE
Tenure in Legislature	NE	0.008**	0.10*	NE
Age of Legislator	NE	NE	-0.006**	NE
Member of Education Committee	0.847***	0.390***	0.419***	0.468***
Member of Appropriations Committee	0.250***	0.159***	0.217***	0.357***
R-squared	.314	.290	.302	.284
F of Equation	22.21	20.24	9.86	5.16
Number of Observations	100	152	96	29

#The cell entries are ordinary least squares regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$

NE = Not Entered

have higher ratings on education policy leadership, a finding contrary to expectations. The indicator of legislative tenure in the Missouri House was found to be moderately related to the leadership indicator, while in the state of Washington it was found to be only weakly related to the rating. In the other two settings, the Michigan House of Representatives and the Missouri Senate, legislative tenure was found not to be related to the leadership rating.

The results of the district characteristics analysis are presented in Table 41. An indication of the lack of explanatory power wielded by the district characteristics is obtained by an examination of the R-square statistic. In two of the House of Representatives analyses, Michigan and Missouri, less than five percent of the variation in education policy leadership was explained by the nine district characteristics. In the state of Washington's House of Representatives approximately 12 percent of the variation in policy leadership was explained. However in the Missouri Senate, slightly more than 36 percent of the variation in education policy leadership was explained by district characteristics.

Two indicators were found to be completely unrelated to the leadership ratings in any of the four settings, the concentration of poor children and the rural/urban lifestyle indicators. Two indicators were found to be related to the leadership rating in only one setting; the desire for public services indicator being related to the leadership rating in Michigan and the percent of the work force employed in wholesale and retail trades being

Table 41

ANALYSIS OF LEADERSHIP ON SCHOOL FINANCE REFORM LEGISLATION USING DISTRICT CHARACTERISTICS#

District Characteristics	Michigan House (1973)	Missouri House (1977)	Washington House (1977)	Missouri Senate (1977)
Rural/Urban Lifestyle	NE	NE	NE	NE
Desire for Public Services	0.098***	NE	NE	NE
Median Family Income	NE	NE	0.001***	-0.003***
Concentration of Children Receiving AFDC Payments	NE	NE	NE	NE
% of Workforce Employed in Manufacturing	NE	-0.004*	0.009***	-0.039**
% of Workforce Employed in Wholesale & Retail	NE	NE	NE	-0.055**
Concentration of Teachers Indicator(s)	NE	-0.008* (MSTA)	0.067***	0.303*** (NEA)
Equalized Tax Effort	NE	-0.090***	NE	-0.369*

R-squared	.042	.041	.121	.368
F of Equation	4.76	2.29	4.33	3.26
Number of Observations	110	163	98	34

#The cell entries are ordinary least squares regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$

NE = Not Entered

negatively related in the Missouri Senate. Two indicators, median family income and equalized tax effort, were related in two settings each, with the equalized tax effort being negatively related to the leadership rating in both the Missouri House and Senate. The median family income indicator was positively related to the leadership rating in the Washington House but was found to be negatively related to the rating in the Missouri Senate. The two remaining indicators, percent of the work force employed in manufacturing and the concentration of teachers, were both found to be related to the leadership ratings in three of the four settings. In both cases the setting that was not included was the Michigan House of Representatives. What is clear from the district characteristics analysis is that there is no district characteristic that is consistently and strongly related to education policy leadership.

Three conclusions can be drawn from the analysis of education policy leadership. The first was highlighted by Barber and Rosenthal and Fuhrman -- i.e., the tendency of policy leaders to belong to the Education Committee and to the Appropriations Committee of the legislature. Membership on these two committees and the work that is entailed confirms many of the findings reported by these two studies.

Second, on the question of tenure and its relationship to education policy leadership, the results are mixed. A key finding in the Rosenthal and Fuhrman study was that education policy leaders had more experience and were more senior than their nonleadership counterparts. Reviewing the analysis of a legislator's personal characteristics, tenure was only found to be moderately or weakly related to the leadership rating in two cases, the Missouri House and the Washington House. There are a number of possible explanations for this unexpected finding. Reforms in the state of Missouri and Washington occurred in 1977 -- four years after the reform in Michigan. Rosenthal and Fuhrman's conclusions were based upon trends they discovered from data collected in 1979-80. It could be that such a trend had not developed in Michigan by 1973 since this was at the beginning of the school finance reform era. It could also be argued that state Senates operate differently from state Houses, and therefore senators in Missouri in 1977 were not likely to be influenced by tenure. However, the most damaging aspect of these results for the argument that tenure is a factor of concern in education policy leadership is not that the effect of tenure was absent in Michigan or the Missouri Senate, but rather that in Missouri and Washington where it was found the relationship was not strong.

Accepting the findings previously reported and the results of the present study on the question of the influence of tenure on policy leadership, what follows is an interpretation integrating the seemingly disparate results. The finding in the present study is that tenure is unrelated to policy leadership, i.e., legislators with few years of experience as well as legislators with many years of experience were identified as leaders. The set of leaders identified by Rosenthal and Fuhrman does not seem to correspond on a one-to-one basis with those identified in the present study as being important in the passage of a particular piece of school finance legislation. The set identified in the present study includes those described by Rosenthal and Furhman but also includes a number of other legislators. These other legislators are centrally involved in the passage of the legislation in the following ways: offering new approaches to an old problem; working to assure that a particular issue is not ignored in the school finance debate; and working to fashion a coalition to support/oppose the legislation. It is likely that these other legislators may not become state education leaders in the future, but it is also highly likely that the new school finance law would not have been enacted if these legislators had not been involved. In the quest for better school finance legislation, it seems that the traditional state education leadership is greatly assisted by a second set of legislators.

Third was the dearth of strong systematic relationships found between district characteristics and the rating of education policy leadership. However, one interesting relationship did emerge. As the size (population) of the district representated by the legislator increases, the influence of the district's characteristics on the likelihood of the legislator getting involved in education leadership increases. For it was found that in the Missouri House with 163 independent legislative districts and in the Michigan House with 110 independent districts the relationships between the district's characteristics and the legislator's rating on education policy leadership was all but negligible. However, when the analysis moved to the state of Washington in which two representatives come from each legislative district and the total number of districts is 49, 12 percent of the variation was explained. In the Missouri Senate where there are 34 independent legislative districts, the percent of the variation explained rose to 37 percent. This relationship between the size of legislative districts and the strength of the relationship between district characteristics and education leadership needs to be explored further.

VIII. COMPARATIVE ANALYSIS

Votes on Certificate-of-Need Legislation for Hospitals

Our primary concern with legislative decision making and voting behavior is generic. The question is: Do legislators respond in a consistent manner to economic and political forces in their district across different issues? The reason for the verification effort is that school finance is an issue with several distinguishing characteristics. Specifically, school finance is addressed in each legislative session, there is a stable cadre of concerned interest groups, and further it often generates heated debate. The policy area selected to verify whether there is a consistent behavior pattern is state certificate-of-need legislation of the health care industry. This legislation tends to be a marked departure from previous state oversight of the hospital industry. Furthermore, it has tended to be a one-time vote in the states where it has occurred.

There are a number of objectives for certificate-of-need legislation; some of them are diametrically opposed. First, it has been proposed as a planning device to ensure that new facilities, additional beds or added services are developed in areas currently underserved. Second, it has been proposed as a quality control device. For a number of surgical/diagnostic procedures, performance improvement is directly related to the frequency of performing the procedure, within a certain range. Open heart surgery is one such example. However, the facilities and equipment necessary to perform these complex procedures are the exact type that most hospitals and physicians want. If all hospitals had the capability to perform these procedures, the actual quality of care would be less since there is insufficient demand to efficiently utilize the facilities and to develop the skills of the practitioners. Consequently, certificate-of-need can be used to match supply with demand, and thereby enhance the quality of care.

Third, it has been proposed as a cost containment measure. Hospitals tend to use average cost pricing. Building excess or underused facilities increases the cost of operation which must be covered by revenues generated from patients. If the patient load is constant, the average cost increases. Since patients are not price sensitive due to the system of third party payers, hospitals feel they can pass along the increased cost of new or expanded facilities without any opposition from the direct users. Thus, using certificate-of-need to stop unnecessary construction/additions projects could restrict the rise in health care costs.

Finally, certificate-of-need has been proposed as a cartel creating and preserving device, although it is unlikely this objective was raised in the legislative debate as a reason for passage. Specifically, there appears to be the normative judgment that full-service hospitals are prepared for meeting society's needs. Full-service hospitals provide a broad range of services even if there is inadequate demand to utilize those services at efficient levels in all facilities. In order to support the broad range of services, hospitals are required to internally subsidize some services by those that are more profitable. This would not be possible if proprietary (for profit) hospitals were permitted to enter the market and offer only those services that are profitable, thereby "skimming the cream" from full-service hospitals. Thus, certificate-of-need is necessary to keep out proprietary or nonprofit hospitals, thereby creating a state sanctioned cartel of existing hospitals.

On the basis of the above proposals, one could envision several groups that would have an interest in this type of legislation. Residents of rapidly growing areas would be one group. If a regulatory reform is introduced, the health care system could be frozen in place or could incur considerable delays in meeting needs due to regulatory lag. Consequently, the group would be underserved.

Low income groups also might perceive that they would be affected by the legislation. Health care delivery tends to be of lowest quality in the poorest areas. Certificate-of-need could be used to freeze the system in place, thereby not permitting services to be expanded or new providers to enter the underserved areas.

The population over the age of 65 tends to be among the highest utilizers of health care services. In addition, they also have organized interest groups and they tend to have a higher propensity to vote in elections. It is likely that older citizens would oppose any legislation that could impact negatively on their access to health care. Furthermore, universal coverage under Medicare would limit the price sensitivity of this group.

Health care is a normal good, that is, the demand for health care increases as one's income increases. Thus, it is expected that higher income residents would tend to insist on access to the best quality health care possible. Given the arguments listed above concerning the relationship between certificate-of-need and the quality of services, the expected direction of this relationship is ambiguous.

Another group that will be examined are the providers of health care services, the hospitals and the physicians. Hospitals would have a direct interest because they would be the target of the legislation. Physicians might have less of an interest since state legislation differs in the extent to which it impacts physicians directly. Furthermore, because the nature of physicians' practices differ, the impact would not be uniform on all of them.

Several measures for hospitals are available. The first is the number of hospitals in the legislative district. The fewer the hospitals, the greater the monopoly position of the existing hospitals. Therefore, certificate-of-need could be considered favorably because it could preserve the monopolistic position. Stated differently, the potential loss from the entry of new providers is relatively high. As the numbers of hospitals in the legislative district increase, two scenarios are possible. In the first, the possibility of a new entrant could be considered threatening to the ability to subsidize the full range of services, which would lead to existing hospitals supporting the legislation. The second scenario is that the quality competition that exists among hospitals would suggest that they maintain the greatest flexibility possible. This would indicate opposition to any controls. Furthermore, as the number of hospitals increases, the cost of organizing and reaching agreement rises such that existing hospitals may not be able to agree on a position on the legislation.

The number of beds per 1,000 population may be interpreted somewhat differently. Specifically, as the number increases, holding other things constant, the ability of the hospitals to internally subsidize services may be reduced. Thus, existing hospitals concentrated in certain legislative districts may favor the legislation. The difficulty is in organizing and demanding the legislation.

The position of physicians depends on the legislation's thrust and physicians' reliance on hospitals for the conduct of their practices. Patient care physicians are likely to oppose the legislation because by limiting the construction of new or the expansion of existing facilities, the opportunity for admitting privileges also is limited. This could have a negative impact on their incomes.

For hospital-based physicians, the expected relationship is ambiguous. Limits on expansion or new facilities would create a cartel, which should enhance their incomes. Conversely, they may attach prestige to having at their disposal the newest equipment and the fullest range of facilities. Thus, they may oppose any legislation that restricts their flexibility. Therefore, the expected direction is ambiguous.

Physicians in the surgical specialties would be most likely to oppose this legislation because many of the technological advances being made in surgical procedures are due to specialized equipment, which would be covered by the certificate-of-need legislation. Because the legislation could be expected to limit access for some surgeons/physicians to the new equipment, and therefore, their using new procedures, they are likely to be opposed to such legislation. Furthermore, the surgical specialties have a separate organization, the American College of Surgeons, which could help to marshall effective opposition among surgeons.

The possible role of the political party also must be considered. With respect to political parties, frequently it is suggested that the ideology of the Republican party is not to interfere with the operation of the market, whereas Democrats take a more active stance in trying to correct perceived market failure. Therefore, it is expected that Democratic legislators would be more likely to vote in favor of passage of certificate-of-need legislation, everything else being equal.

With respect to cues, certificate-of-need legislation is not as technical as school finance legislation, though it is more technical than some. Conversely, it does not affect as definable a population of consumers, such as families with small children, as does school finance legislation. It may be quite difficult for individual legislators to decide which way to vote due to the lack of definite signals or the technical nature of the proposals.

Therefore, cues may be given by leaders and taken by representatives more frequently.

One of the pitfalls of analyzing regulatory legislation is that it must be assumed that the regulations will be applied impartially. It has been suggested that regulatory agencies tend to favor existing providers over new entrants. Consequently, existing providers may support the legislation because it is assumed that the rules will not be applied against them, but only against new providers.

The results for the House of Representatives' votes in Washington and Missouri are presented below. The legislation of each state will be discussed; differences between the states will be examined; and how these differences lead to alternate hypotheses concerning the support/opposition of groups will be analyzed.

Washington

The Washington state legislature adopted the certificate-of-need legislation (HB 553) in May of 1971. Adoption was clear-cut as 83 representatives voted in favor of the proposal while only 7 voted against it. New York state, in 1964, was the first state to enact this type of legislation and several states followed its lead, but by 1971 less than 20 states had adopted similar legislation. Washington's legislation was straightforward. Both hospitals and nursing homes were covered, but physicians' offices were not. A grandfather clause was included to exempt from the legislative requirements plans that were already on "the drawing boards." The scope of the legislation was delineated in the following definition of construction:

> Construction means the erection, building or substantial acquisition, alteration, reconstruction, improvement, extension or modification of a hospital or nursing home, including equipment . . . which cost in excess of $100,000 dollars.

The penalty for noncompliance was ineligibility for reimbursement under a Washington state health care program. No loss of license was involved. See Table 42 for the descriptions of the measures used in the analysis.

The first stage of the analysis was an examination of the bivariate relationship between the individual measures of physician and hospital concentration and the vote on HB 553. None of the measures of physician concentration, patient care physicians, hospital based physicians or surgeons per 100,000 population, was statistically significant in predicting the legislator's vote. Conversely, all three measures of hospital concentration, hospital beds per 100,000 population, number of hospitals and the number of hospitals per 100,000, were negatively related to passage and were statistically significant.

One explanation for the result is that HB 553 made no explicit mention of physicians; it applied only to hospitals. Therefore, physicians may have felt that there was no need to organize. Several possible objectives were delineated above for the expected relationship between hospitals and the legislation. A negative coefficient on the number of hospitals and on the number of hospitals per 100,000 is more consistent with the quality competition argument -- hospitals desire to maintain as

Table 42

LIST OF VARIABLES FOR WASHINGTON CERTIFICATE-OF-NEED ANALYSIS

Description	Mean	Standard Deviation
Political party of the legislator (1 = Democrat; 0 = Republican)	.48	.50
Median income of families in the legislative district	10,402.22	1,250.99
Children receiving aid under the Aid to Families with Dependent Children program per 1,000 population in the legislative district	27.78	5.38
Patient care physicians per 100,000 population in the legislative district	123.83	56.09
Surgical specialty physicians per 100,000 population in the legislative district	30.73	12.09
Hospital based physicians per 100,000 population in the legislative district	20.94	20.81
Number of hospitals in the legislative district	2.10	1.75
Beds per 100,000 population in the legislative district	306.33	82.73
Number of hospitals per 100,000 population in the legislative district	2.91	2.31
Percent of population 65 years of age and older in the legislative district	10.27	1.31
Percentage change in population between 1970 and 1975 in the legislative district	3.97	6.09

much flexibility as possible in order to meet the competition -- rather than organizing to keep out potential competition. It also is consistent with the argument that smaller groups are able to organize more effectively to achieve their legislative objectives. The relationship between the vote and the number of hospital beds per 100,000 population is contrary to expectation.

Three other specifications of legislators' votes on HB 553 are reported in Table 43. The first specification simply includes the political party of the legislator. The coefficient is positive and statistically significant, which is consistent with the expectation that the Democratic party tends to view this government intervention in the market more favorably. It should be noted that the percent correctly classified statistic is not a particularly good indication of the model's accuracy on this vote because the vote was quite lopsided (83 to 7) in favor of the passage. Thus, the a priori odds would yield a very high "percent correctly predicted."

Measures of the health industry interest groups and characteristics of the population are entered in the second specification. As hypothesized, concentrations of recipients of aid to families with dependent children and districts that were increasing in population relatively fast tended to be opposed to the legislation, perhaps because it was felt that certificate-of-need requirements would limit access to health care. The coefficient of political party was positive and statistically significant. Furthermore, the number of hospitals per 100,000 and the dummy variable which has the value of 1 when

Table 43

WASHINGTON HOUSE, 1971
CERTIFICATE-OF-NEED#

Number of AFDC recipients		-0.247***	-0.140**
Percent of population over 65 years of age		NE	NE
Percent change in population between 1970 and 1975		-0.312***	-0.249***
Median family income		NE	NE
Party affiliation	1.864**	1.945*	1.600*
Number of hospitals		-0.447**	NE
Number of surgical specialty physicians (indicates high concentration)		-3.518***	NE
Number of hospital beds			-0.011**

Intercept	1.864	14.287	11.537
-2 log likelihood	45.17	26.50	29.64
Model chi square	4.03	22.69	19.55
Percent correctly classified	92.2	94.4	94.4

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

there is a high concentration of surgical specialists in the district were both negative and statistically significant. Again, the results may reflect the desire to compete on a quality basis and therefore to maintain flexibility. It is interesting to note, however, that these groups were able to organize and to have variations in their values reflected in the vote.

The third specification is very similar to the second except the hospital beds per 100,000 was added to the stepwise logistic procedure. Its inclusion rendered the hospital and the surgical specialist indicators insignificant. The hospital beds indicator was negatively related to the vote for the legislation, which is somewhat surprising because the certificate-of-need proposal could have been used to limit additional beds and thereby permit internal subsidization. One interest group that was not entered in the specification was the percent of the population over age 65. A priori it was expected that this group would be a strong opponent of the legislation.

Missouri

Certificate-of-need legislation was considered by the Missouri House of Representatives (HB 1413) in 1977. The House voted against the bill, defeating it by a margin of 76 to 60. The vote in Missouri was surprising, particularly since it occurred after the National Health Planning, Resources and Development Act (P.L. 93-641) was enacted by the U.S. Congress in 1975. The reason for the surprise is that P.L. 93-641 provided a number of incentives for states to adopt health facility regulatory legislation.

The Missouri legislation was more complicated than that of Washington. Hospitals were the only institutions to be covered; nursing homes were to be excluded. Furthermore, the practices of licensed health care professionals were explicitly excluded, even when their offices (practices) were located in a health care facility covered by the provisions of the proposal. This aspect of the legislation was particularly advantageous in that physicians could purchase new diagnostic equipment costing more than the $150,000 threshold level and use it in their practices located in a health care facility without going through the certificate-of-need procedure. Hospitals, on the other hand, were required to obtain a certificate-of-need in order to purchase the equipment.

The provisions of the legislation covered construction, modernization, renovation, changes in clinically related health care services, and the replacement, acquisition or modernization of equipment, in which the expected cost was greater than $150,000. Any increase in the number of licensed beds also was covered. Routine maintenance did not require approval even if the cost exceeded $150,000.

Perhaps the most troublesome provision to providers of health care services was the incorporation of rate review procedures. Section 11.1 of HB 1413 read as follows:

> The commission shall review the proposed budget and schedule of rate increases for each hospital and shall approve or deny the schedule of rate increases for charges to their patients or their insurers not later than forty-five days after its receipt of the schedule....

The rate review procedure could severely constrain the hospitals from funding new projects, even if they could get approval for them, because the rate review could limit their ability to generate excess revenues. Secondly, it could constrain internal subsidization of services. Rates on profitable services could be frozen rather than raised to subsidize some unprofitable services.

Consequently, the proposal appeared to place severe constraints on hospitals due to its rate review provision. Physicians were not affected directly as a result of the exclusions in the statute. However, the limitations on equipment purchases by hospitals may also have been odious to surgical care specialties. The severity of the penalty, loss of license, was probably sufficient to deter violation of the statute, if it had been enacted. (See Table 44 for descriptions of the measures used to analyze the vote.)

The first stage of the analysis, a bivariate examination of the relationship between individual measures of physicians and hospital concentration and the legislators' vote, was repeated in Missouri for HB 1413. The results were very different. The three measures of physician concentration, patient care, hospital based and surgeons, were all negatively related and statistically significant. Conversely, only the variation in beds per 100,000 population was related at statistically significant levels to the vote (the relationship was negative).

These results are very interesting. Physicians were specifically excluded from all certificate-of-need requirements of

Table 44

LIST OF VARIABLES FOR MISSOURI CERTIFICATE-OF-NEED ANALYSIS

Description	Mean	Standard Deviation
Political party of the legislator (1 = Democrat; 0 = Republican)	.681	.46
Percent of labor force employed in manufacturing in the legislative district	28.87	7.17
Percent of the labor force employed in wholesale and retail trade in the legislative district	30.59	4.83
Median income of families in the legislative district	8,969.69	2,271.42
A variable developed through factor analysis indicating desire for public services in the legislative district	.00	.97
A variable developed through factor analysis indicating urban/rural lifestyle in the legislative district	.00	.95
Children receiving aid under the Aid to Families with Dependent Children program per 1,000 population in the legislative district	43.82	35.00
Patient care physicians per 100,000 population in the legislative district	130.98	145.26
Surgical specialty physicians per 100,000 population in the legislatve district	30.78	30.56
Hospital based physicians per 100,000 population in the legislative district	43.73	72.99
Beds per 100,000 population in the legislative district	537.44	497.91

Table 44 (Continued)

LIST OF VARIABLES FOR MISSOURI CERTIFICATE-OF-NEED ANALYSIS

Description	Mean	Standard Deviation
Number of hospitals per 100,000 population in the legislative district	2.97	2.19
Population per square mile in the legislative district	1,730.39	2,771.19
Percent of population 65 years of age and older in the legislative district	12.67	3.60
Percentage change in population between 1970 and 1975 in the legislative district	1.83	8.99
Per capita income in the legislative district	4,271.62	859.85

HB 1413. However, they were mentioned in the legislation, a fact which had not occurred in the Washington legislation. Thus, physicians may have organized to oppose what they perceived as a possible trend. If the legislation had been adopted, they could have been brought under its coverage in the future simply by an incremental change of a few words. Conversely, without related legislation on the books, regulating them in the future would require more than an incremental change. Hospitals, on the other hand, had grown accustomed to regulation by 1977, so their opposition was less concerted.

Table 45 lists four additional specifications for explaining variations in the vote. The first specification indicates that the vote was very much along party lines, but contrary to the experience in Washington, Democrats tended to vote against the proposal. The second specification indicates that the blue collar workers and the small business interest favored the proposal. This would be consistent with the cost control objective that was ascribed to certificate-of-need. The third specification demonstrates the continued importance of the business interest groups, but also that the Republican leadership set the tone for the other members of the Republican party. Finally, the fourth specification demonstrates the lack of importance of the health care interest groups in the Missouri legislation. Variations in these measures are not associated with variations in the vote. Furthermore, the explanatory power of the estimating equation, as measured by percent correctly predicted, is much lower than in the three previous specifications.

Table 45

MISSOURI HOUSE, 1977
CERTIFICATE-OF-NEED#

Party affiliation	-4.687***	-4.890***		
Rural/urban lifestyle		0.457*	0.642**	
Desire for public services		NE	NE	
Median family income		NE	NE	
Number of AFDC recipients per 1,000 population		NE	NE	
Percent employed in manufacturing (blue collar)		0.079**	0.080***	
Percent employed in wholesale/retail trades (small business)		0.204***	0.195***	
CUES:				
Republican appropriations committee			NE	
Democratic appropriations committee			NE	
Republican leadership			4.824***	
Democratic leadership			NE	
Number of patient care physicians				NE
Number of hospital based physicians				NE
Number of surgical specialty physicians				NE
Number of hospital beds				NE
Population per square mile				NE

Table 45 (Continued)

MISSOURI HOUSE, 1977
CERTIFICATE-OF-NEED#

Percent of population over 65 years of age				NE
Percent change in population between 1970 and 1975				0.095***
Per capita income				NE
Intercept	3.113	-5.502	-10.101	-0.557
-2 log likelihood	107.34	91.75	96.79	179.38
Model chi square	91.73	107.32	102.28	19.69
Percent correctly classified	87.0	87.0	84.2	65.1
Number of observations	146	146	146	146

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and

$p \leq .30$; NE = Not Entered.

In conclusion, although interest groups in general were important in these votes, different groups emerged in Missouri and Washington. Whereas the variations in the concentration of health care industry interests were determinants of the variation in the vote in Washington, that was not the case in Missouri. Instead, it appears that the vote in Missouri was more influenced by industrial and commercial interests. However, the vote in Missouri was six years later and by that time, those paying the premiums had become much more concerned with the perceived failure of the health care market. Thus, the difference in the results may simply represent changing priorities of voters with the emergence of different interest groups.

As illustrated in the above discussion, there are a number of similarities between the determinants of votes on school finance legislation and certificate-of-need legislation. In the certificate-of-need legislation in Washington, the concentration of hospitals and surgeons influenced the vote of the legislators -- an influence that could certainly be characterized as being in the self-interst of the district. Further, party affiliation and characteristics of the district population also were related to the vote. This set of influences is closely related to that found on school finance legislation that would distribute a large amount of new state aid.

In Missouri, on the other hand, party affiliation and characteristics of the district continued to play an important role in determining the vote. However, indicators of self-inteest on the part of health-related persons or agencies were not related to the vote. The possible reasons for this discrepancy were discussed above, and it could be argued that the vote in Missouri more closely resembled a vote on a regulatory amendment to a school finance bill than to a vote on the complete package.

Does the Upper Chamber Face Different Political Pressures?

The development of the school finance reform legislation in the state of Missouri has been described in some detail in Chapter V. The role of the previous study commissions, especially the Governor's Conference on Education, contributed to the development of the school finance reform proposal, known as HB 131, in the Missouri Legislature in 1977. The latter part of Chapter V described the importance of the various voter behavior theories to the votes in the Missouri House of Representatives on specific aspects of the school finance reform. The final vote analyzed in that section was the perfected version of HB 131 which was then passed along to the Senate. Unfortunately the Senate never took a direct vote on that version of the bill, although the Senate did use the perfected version as the basis for making its few but important changes in the legislation. In this section the analysis of the Senate votes on the Senate Committee substitute for HB 131 and the Conference Committee substitute for HB 131 will be presented in an attempt to determine whether different political forces were at work in the Missouri House and the Missouri Senate.

When the perfected version of HB 131 was presented to the Senate Education Committee, there were four issues that needed to be resolved before the Committee could recommend it. The first concerned the transportation aid formula. At stake was the phase-in period of the transportation aid formula, with the House version of the bill calling for complete funding in two years while the Senate wanted a higher percentage of the costs to be paid in the first year. The second area of concern dealt with the Grandfather clause in the House version of HB 131. The senators felt that the $200 flat grant guarantee was not high enough. The third area in which the Senate Education Committee expressed disagreement with the House focused on how to measure local school district wealth. The senators leaned strongly toward the adoption of an income adjustment to local property wealth. The final area in which disagreement occurred was the method the House proposed to count pupils. Historically the Senate had been a staunch proponent of the ADA (average daily attendance) pupil count and it was not inclined to agree to the House compromise using 50 percent ADA and 50 percent ADM (average daily membership).

Vote on the Senate Committee Substitute for HB 131

The Senate Education Committee finally recommended the following changes in their substitute for the House version of HB 131. The first was the inclusion of an income factor that would adjust the local tax rate deduction of the foundation and guaranteed tax base portions of the school funding formula. However, instead of allowing the adjustment to vary directly with the range of values determined by the ratio of a district's average income per tax return value to the statewide average value, deviations from the average were only weighted at half of the actual value. The second change allowed the funding of the transportation formula at 100 percent of the difference between a district's entitlement under the new reimbursement schedule and the previous reimbursement schedule. This deleted the phase-in provision in the House version of the bill. The third change raised the floor of the Grandfather clause from $200 per pupil to $283 per pupil and adjusted it by including the following growth factor: "the $283 figure shall be adjusted annually by the same percentage that the appropriation of the state funds for the school foundation program is changed from the previous year." The Senate Education Committee did not recommend a change in the pupil count from what was described in the House version of HB 131.

When the Senate Education Committee substitute for HB 131 was considered on the floor of the Missouri Senate a number of amendments were offered to the Committee substitute. For the most part these amendments were defeated; however, there were four changes that did pass. Two of the four were minor, the first being a paragraph numbering change in the bill and the second clarifying the definition of adjusted gross income per return by indicating that income refers only to the total Missouri individual adjusted gross income. The other two amendments carried a more substantive impact. The first concerned the requirement that school districts spend 75 percent of state school funds on teachers' salaries. It expanded the definition of teacher salaries to include social security, unemployment compensation, pensions and other fringe benefits. The fourth amendment added a statement to the Grandfather provision in the bill clarifying that the annual adjustment to the $283 shall be applied to the amount per eligible pupil apportioned in the previous year. With the incorporation of these amendments the Senate took its vote on the Senate Committee substitute for HB 131 (passed: Yes 21, No 10).

The description of variables used in the analysis of the Senate votes is presented in Table 46 along with the means and standard deviations. The analysis of the influence of the independent voting behavior theories is presented in Table 47. In the economic self-interest model, the change in state aid indicator was found to be strongly related to the vote. Districts which would experience larger growth in state aid per capita were much more likely to vote in favor of the Education Committee substitute than those with smaller growth. The economic self-interest model correctly classified 83.9 percent of the senators voting on this version of the bill. The median family income also was found to be strongly related to the vote on the Senate substitute with districts having higher levels of median family income most likely to vote against it. The median family income indicator correctly classified 80.6 percent of the voting senators.

Only two of the six indicators included in the interest group model were entered in the analysis of the Education Committee's substitute for HB 131. The first, NEA membership, was found to be strongly related to the vote with districts having high concentrations of NEA members most likely to vote against the measure. The other variable entered into the interest group

Table 46

MISSOURI SENATE, 1977
House Bill 131

List of Variables

Description	Mean	Standard Deviation
Political party affiliation of the legislator (1 = Democrat; 0 = Republican)	.64	.48
A measure of constituency influence indicating differences among legislative districts along a rural to urban dimension (negative values indicate urban interests)	-.00	.99
A measure of constituency influence indicating differences among districts along a desire for public services dimension (positive values indicate more of a desire for public services)	-.00	.99
Number of AFDC recipients per 1,000 population in the legislative district	43.80	33.68
Percent of population in the legislative district employed in manufacturing (blue collar indicator)	28.81	5.30
Percent of population in the legislative district employed in wholesale/retail trades (small business indicator)	30.58	4.04
Median family income in the legislative district	8982.41	2198.89
Number of years of legislative service of the legislator	9.35	5.85
Age of the legislator at the time of voting	49.10	9.05
Membership of the legislator on the Education Committee (1 = member; 0 = nonmember)	.29	.46
Membership of the legislator on the Appropriations Committee (1 = member; 0 = nonmember)	.29	.46
Leadership score of the legislator (increasing positive values indicate higher levels of policy leadership)	.27	.51
Percent change per capita in state aid to schools in the legislative district	41.19	17.18

Table 46 (Continued)

MISSOURI SENATE, 1977
House Bill 131

List of Variables

Description	Mean	Standard Deviation
Equalized tax rate in the legislative district (taxpayer interest group indicator)	2.95	.50
Number of Missouri State Teachers' Association members per 1,000 population in the legislative district	6.84	4.23
Number of Missouri NEA members per 1,000 population in the legislative district	2.44	2.18
CUES: (if cue is given, indicator = 1)		
Republican leadership cue for the vote on the Senate Committee Substitute for HB 131	.29	.46
Democratic Education Committee cue for the vote on the Senate Committee Substitute for HB 131	.47	.50
Republican Education Committee cue for the vote on the Senate Committee Substitute for HB 131	.23	.43
Democratic leadership cue for the vote on the Conference Committee Substitute for HB 131	.55	.50
Republican leadership cue for the vote on the Conference Committee Substitute for HB 131	.29	.46
Democratic Education Committee cue for the vote on the Conference Committee Substitute for HB 131	.47	.50
Republican Education Committee cue for the vote on the Conference Committee Substitute for HB 131	.23	.43
Democratic Appropriations Committee cue for the vote on the Conference Committee Substitute for HB 131	.44	.50

Table 47

MISSOURI SENATE, 1977
House Bill 131

The vote on the Senate Education Committee Substitute for HB 131.

	Voting Behavior Models‡						
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party	First Combined	Second Combined
Party affiliation					-0.3617	NE	
Change in state aid	0.1125***						0.1791***
Rural/urban lifestyle				-1.6025***		-1.9770***	NE
Desire for public services				0.2482		NE	NE
Number of AFDC recipients			NE			NE	NE
Percent employed in manufacturing (blue collar)			0.2305*			NE	NE
Percent employed in wholesale/retail trades (small business)			NE			-0.3088**	-0.6653*
Number of Missouri State Teachers' Association members			NE			NE	NE
Number of Missouri NEA members			-0.7890***			NE	NE
Equalized tax rate			NE			NE	NE
Median family income		-0.0007***				NE	NE
CUES:							
Democratic leadership							
Republican leadership							NE
Democratic Education Committee							-2.6802*
Republican Education Committee							NE
Democratic Appropriations Committee							
Republican Appropriations Committee							

Table 47 (Continued)

MISSOURI SENATE, 1977
House Bill 131

The vote on the Senate Education Committee Substitute for HB 131.

	Voting Behavior Models‡						
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party	First Combined	Second Combined
Intercept	-3.1958	7.8919	-3.0536	1.1443	0.9808	10.8591	16.9620
-2 log likelihood	24.79	27.74	25.42	26.95	38.79	23.09	18.27
Model chi square	14.20	11.25	13.56	12.04	0.20	15.90	20.72
Percent correctly classified	83.9	80.6	77.4	80.6	67.7	80.6	80.6
Number of observations	31	31	31	31	31	31	31

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \le .05$;   ** if $p > .05$ and $p \le .10$;   * if $p > .10$ and $p \le .30$;   NE = Not Entered.

equation was the blue-collar indicator. This indicator was only moderately related to the vote, with districts having higher percentages of their work force in manufacturing being much more likely to vote in favor of this version of the bill. Together these two indicators correctly classified 77.4 percent of senators who voted. The influence of the constituency model showed mixed results. The urban/rural lifestyle indicator was strongly related to the vote with urban interests much more likely to vote in favor of the bill. However, the desire for public services indicator was unrelated to the vote. The constituency indicators correctly classified 80.6 percent of the senators on this vote. The final relevant influence on the vote could have been the influence of political party. However, the results found in Table 47 indicate that political party was unrelated to the vote. The strongest theoretical contributors to an understanding of the Senate Education Committee substitute for HB 131 were the economic self-interest model, the median family income factor and the constituency influence model. The preliminary results indicate that senators representing the winners under the aid formula -- the urban school districts and districts with low median family income -- tended to vote in favor of the Senate Education Committee substitute.

The first combined equation which used the political party indicator but not the economic self-interest indicator also is shown in Table 47. Two variables were entered in the equation, the rural/urban lifestyle and the percent of the work force employed in wholesale and retail trades. The rural/urban indicator was strongly related to the vote showing that metropolitan areas tended to vote in favor of the legislation. The small business indicator was moderately related to the vote and districts with a large work force in wholesale and retail trades tended to vote against the bill. The two indicators combined to correctly classify 80.6 percent of the voting senators.

Substituting the cues for the political party indicator and including the change in state aid indicator for economic self-interest, two variables were entered into the second combined equation. The indicator that dominated the second combined equation was economic self-interest, i.e., change in state aid per capita. This variable was strongly related to the vote on the bill with districts receiving larger increases in state aid tending to vote in favor of the legislation. As in the first combined equation, the small business indicator was weakly and negatively related to the vote. The equation correctly classified 80.6 percent of those voting. In the Missouri Senate, the vote on the Senate Education Committee substitute for HB 131 was driven by economic self-interest.

The Vote on the Conference Committee Substitute

As is often the case, the House disagreed with the Senate substitute and requested a conference to determine the final version of HB 131. What emerged from the Senate-House Conference was basically the House version of the bill with an income adjustment to the property tax deduction and a $283 per pupil Grandfather clause to be adjusted annually. The calculation of the adjustment was as follows, "the $283 base figure shall be multiplied annually by the same percent that the appropriation of state funds for the school foundation program is changed from the previous year and the product added to the amount per eligible pupil apportioned the previous year under this section." An additional limitation was added in which the wealthiest districts could never receive an annual adjustment larger than the annual adjustment for the districts in the lowest fifth percentile. A third modification made in the Conference was the elimination of fringe benefits from the teacher salary spending requirement of local school districts. The vote to pass the Conference Committee substitute for HB 131 cleared the Missouri Senate by a margin of 23 to 9.

In Table 48 the results of the analysis of the individual voting behavior theories are presented. The economic self-interest model was again strongly related to the vote on the Conference substitute for HB 131. Districts receiving larger increases in state aid per capita were likely to vote in favor of it. The economic self-interest model correctly classified 81.3 percent of the senators voting on the bill. Median family income was also strongly related to the vote on the Conference Committee substitute. Districts with high median family income tended to vote against the bill. In the interest group model, two of the indicators were entered into the equation -- the concentration of MSTA members and the small business indicator. The former was strongly and positively related to the vote while the latter was only moderately related with its coefficient carrying a negative

Table 48

MISSOURI SENATE, 1977
House Bill 131

The Senate vote on the Conference Committee Substitute for HB 131.

	Voting Behavior Models#						
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party	First Combined	Second Combined
Party affiliation					-0.0645	NE	
Change in state aid	0.0926***						NE
Rural/urban lifestyle				-2.0579***		-2.0579***	-2.3069***
Desire for public services				-0.7613*		-0.7613*	NE
Number of AFDC recipients			NE			NE	NE
Percent employed in manufacturing (blue collar)			NE			NE	NE
Percent employed in wholesale/retail trades (small business)			-0.3074**			NE	NE
Number of Missouri State Teachers' Association members			0.7502***			NE	NE
Number of Missouri NEA members			NE			NE	NE
Equalized tax rate			NE			NE	NE
Median family income		-0.0007***				NE	NE
CUES:							
Democratic leadership							NE
Republican leadership							NE
Democratic Education Committee							-2.4180**
Republican Education Committee							NE
Democratic Appropriations Committee							NE
Republican Appropriations Committee							

Table 48 (Continued)

MISSOURI SENATE, 1977
House Bill 131

The Senate vote on the Conference Committee Substitute for HB 131.

	Voting Behavior Models‡						
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party	First Combined	Second Combined
Intercept	-2.2989	7.9720	6.5106	1.9495	0.9808	1.9495	3.2227
-2 log likelihood	27.61	27.29	23.74	24.68	38.02	24.68	22.47
Model chi square	10.42	10.73	14.28	13.34	0.01	13.34	15.56
Percent correctly classified	81.3	75.0	75.0	75.0	71.9	75.0	87.5
Number of observations	32	32	32	32	32	32	32

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$;   ** if $p > .05$ and $p \leq .10$;   * if $p > .10$ and $p \leq .30$;   NE = Not Entered.

sign. In the constituency influence model, the rural/urban lifestyle indicator was strongly related to the vote while the desire for public services indicator was weakly related. Their coefficients indicated that the cities were generally in favor of the legislation while districts with high desire for public services tended to vote against the Conference Committee substitute. Finally, it was found that the political party indicator was not related to the vote on the final version of the bill. From the results of the analysis, it again seems that the economic self-interest model is the most appropriate explanation of the vote on the Conference Committee substitute in the Missouri Senate.

The results of the combined analysis are presented in Table 48. In the first combined equation, only the constituency influence indicators were entered. The rural/urban lifestyle dimension was strongly related to the vote, while the desire for public services indicator was only weakly related. Both carried negative signs. The first combined equation correctly classified only 75 percent of the voting senators. In the second combined equation, the rural/urban lifestyle indicator was again found to be strongly and negatively related to the vote. The only other measure entered in the second equation was a moderately strong cue from Democrats on the Education Committee. The signs on the two coefficients indicated that urban areas favored the passage of the bill, while Democrats opposed it. The second combined equation correctly classified 87.5 percent of the voting senators.

In summary, the following can be said about the distinctions between the votes on the HB 131 finance package in the House and the vote in the Senate. The vote on the perfected version of HB 131 in the House and the votes on the Senate Committee substitute and the Conference Committee substitute for HB 131 in the Senate are the key comparisons since they were all taken on a complete package. In both the House and the Senate the economic self-interest indicator, change in state aid per capita, was strongly related to the vote. In the Senate, the economic self-interest indicator and the rural/urban lifestyle indicator were the important contributors to an understanding of how senators voted. The tension between district self-interest and the difference in rural versus urban lifestyle indicated how difficult the voting decision was in the Missouri Senate. In the Missouri House of Representatives' vote on HB 131, the change in aid per capita indicator was also strongly related to the vote; however, it was not the only indicator. In the Missouri House the political party indicator or the political party cues were also strongly related to the vote, suggesting that indeed some legislators had followed their political party leaders independently of the direct benefits of the bill to their districts. On the whole, the striking features of the analysis of these votes were the reliance upon the economic self-interest and the evidence of the existence of a rural/urban coalition.

The focus on economic self-interest is related to the fact that Missouri distributed approximately 55 million new dollars (or approximately a 13 percent increase) through the aid formula as a result of the 1977 finance reform. When a sum of this magnitude is inserted in a financing system, the tendency is for legislators to look out for their own. Further, the presence of self-interest coincides with the reports from those interviewed who said that, by and large, legislators used computer printouts to judge the bottom lines for their legislative districts.

Do Factors that Influence Legislative Behavior Change Over Time?

The House of Representatives in the state of Missouri provided a natural experimental setting to judge the continuity of influence of factors on legislative voting behavior over time. In 1975 the Missouri House of Representatives took roll call votes on a bill designed to modify the school financing system in the state of Missouri. This bill, known as HB 350, proposed a number of the changes that were eventually included in the legislation passed as HB 131 in 1977. The factors proposed in both bills included moving to a definition of eligible pupils that would weight membership and attendance equally, moving to a computation of the minimum aid guarantee using a "state expenditure factor" rather than a fixed dollar amount, and building into the formula a change in the way aid to AFDC recipients and orphans was calculated. The one area in which the two proposed formulas differed was in the focus on the local school district's assessed valuation. In 1975 the focus was on adjusting the assessed property valuation; however, by 1977 that problem had been resolved by computing an equalized tax rate. In addition, the proposed formula in HB 350 did not include such factors as a guaranteed tax base add-on, an income adjustment to the property valuation, or any adjustments in the state transportation aid formula. Two important factors in the climate surrounding Missouri school finance occurred between 1975 and 1977 and also should be noted. The 1976 Governor's Conference on Education provided a great opportunity for consensus building (see Chapter V for more detail). In addition, there was an awareness of the national school finance reform movement since the St. Louis Board of Education had filed a Serrano-like challenge to the existing state school finance system. Nonetheless, the similarities between the two bills are obvious and their availability for comparison over time was an opportunity to analyze the evolution of a new school finance system.

Two votes were analyzed from the earlier year. The first was to modify the section of the bill that determined the number of eligible pupils by equally weighting membership and attendance. The second vote was taken on the perfected version of HB 350.

The Vote on the ADA-ADM Issue

The original version of HB 350 proposed to count eligible pupils as the sum of the number of pupils enrolled on a particular day plus the average daily attendance divided by two. The effect of the proposal was to weight attendance and membership equally in the counting of pupils for state aid purposes. As HB 350 was being considered on the floor of the House of Representatives, a substitute amendment was put forward to weight the influence of attendance more heavily than enrollment. The actual change in the wording of the bill was as follows: "the sum of enrollment on a particular day is added to three times the average daily attendance. The result is divided by four." The proposed amendment was adopted by the full House by a vote of 91 to 62 and is analyzed below.

The description, means and standard deviations of the variables used to analyze the votes on HB 350 are presented in Table 49. The results of the analysis of the individual voting behavior theories on the vote to weight attendance more heavily than enrollment are presented in Table 50. The economic self-interest indicator had to be changed in the analysis of the 1975 vote because reliable estimates of the change in state aid were unavailable, since this reform measure was never enacted into law. The new indicator of economic self-interest incorporated was the equalized assessed valuation per capita. This indicator was assumed to be correlated with the change in state aid indicator, although opposite in sign.

In the analysis of the vote, the equalized assessed valuation per capita was strongly related to the vote, with its negative sign indicating that areas with low equalized assessed valuation per capita tended to vote in favor of the amendment. The median family income indicator was found to be unrelated to the ADA-ADM question. The interest group model, however, was more helpful with four indicators entering into the equation and three being strongly related to the vote. The concentration of MSTA members, the concentration of NEA members and the concentration of poor children were the three indicators strongly related to the vote. The MSTA membership and the NEA membership indicators were positively related while the concentration of poor children indicator carried a negative sign. The blue-collar indicator was

Table 49

MISSOURI HOUSE, 1975
House Bill 350

List of Variables

Description	Mean	Standard Deviation
Political party affiliation of the legislator (1 = Democrat; 0 = Republican)	.69	.46
A measure of constituency influence indicating differences among legislative districts along a rural to urban dimension (negative values indicate urban interests)	-.00	.95
A measure of constituency influence indicating differences among districts along a desire for public services dimension (positive values indicate more of a desire for public services)	-.00	.96
Number of AFDC recipients per 1,000 population in the legislative district	43.82	35.00
Percent of population in the legislative district employed in manufacturing (blue collar indicator)	28.87	7.17
Percent of population in the legislative district employed in wholesale/retail trades (small business indicator)	30.59	4.83
Median family income in the legislative district	8969.69	2271.42
Number of years of legislative service of the legislator	6.68	4.65
Age of the legislator at the time of voting	44.85	10.21
Membership of the legislator on the Education Committee (1 = member; 0 = nonmember)	.14	.34
Membership of the legislator on the Appropriations Committee (1 = member; 0 = nonmember)	.15	.36
Total equalized property valuation per capita in the legislative district	2829.12	2015.83
Equalized tax rate in the legislative district (taxpayer interest group indicator)	2.94	.54
Number of Missouri State Teachers' Association members per 1,000 population in the legislative district	6.89	4.39
Number of Missouri NEA members per 1,000 population in the legislative district	2.42	2.35

Table 49 (Continued)

MISSOURI HOUSE, 1975
House Bill 350

List of Variables

Description	Mean	Standard Deviation
CUES: (if cue is given, indicator =1)		
Democratic leadership cue on the vote on the ADA-ADM issue	.66	.47
Republican leadership cue on the vote on the ADA-ADM issue	.28	.45
Democratic Education Committee cue on the vote on the ADA-ADM issue	.59	.49
Republican Appropriations Committee cue on the vote on the ADA-ADM issue	.25	.43
Democratic leadership cue on the vote on the perfected version of HB 350	.66	.47
Democratic Education Committee cue on the vote on the perfected version of HB 350	.59	.49
Democratic Appropriations Committee cue on the vote on the perfected version of HB 350	.58	.49
Republican Appropriations Committee cue on the vote on the perfected version of BH 350	.25	.43

Table 50

MISSOURI HOUSE, 1975
House Bill 350

The amendment provided a higher weighting for average daily attendance than for enrollment.

	Voting Behavior Models‡						
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party	First Combined	Second Combined
Party affiliation					-3.0009***	-3.4595***	
Total equalized valuation	-0.0005***						NE
Rural/urban lifestyle				0.9388***		NE	NE
Desire for public services				-1.0424**		NE	NE
Number of AFDC recipients			-0.0311***			-0.0214**	-0.0176*
Percent employed in manufacturing (blue collar)			-0.0582**			-0.1034***	-0.0918***
Percent employed in wholesale/retail trades (small business)			NE			NE	NE
Number of Missouri State Teachers' Association members			0.3527***			0.4651***	0.5337***
Number of Missouri NEA members			0.4009***			0.6265***	0.7224***
Equalized tax rate			NE			NE	NE
Median family income		-0.0000				NE	NE
CUES:							
Democratic leadership							NE
Republican leadership							2.1082**
Democratic Education Committee							1.1374*
Republican Education Committee							
Democratic Appropriations Committee							
Republican Appropriations Committee							3.1632***

Table 50 (Continued)

MISSOURI HOUSE, 1975
House Bill 350

The amendment provided a higher weighting for average daily attendance than for enrollment.

	Voting Behavior Models#						
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party	First Combined	Second Combined
Intercept	1.8680	0.6998	-0.1456	0.4843	2.7300	2.0718	-3.5630
-2 log likelihood	176.14	206.35	141.52	148.45	164.86	108.91	104.52
Model chi square	30.43	0.22	65.06	58.12	41.72	97.67	102.05
Percent correctly classified	71.2	59.5	78.4	79.1	68.6	85.6	82.4
Number of observations	153	153	153	153	153	153	153

#The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$; ** if $p > .05$ and $p \leq .10$; * if $p > .10$ and $p \leq .30$; NE = Not Entered.

moderately related to the vote with districts having high percentages of workers employed in manufacturing most likely to vote against the amendment to favor attendance over membership. The constituency influence indicators were both found to be strongly related to the vote; with districts exhibiting a high desire for public services tending to vote against the amendment and rural districts likely to vote in favor of it. The influence of both constituency indicators correctly classified 79.1 percent of legislators voting on the amendment. The political party indicator was also strongly related to the vote with Republicans more likely than Democrats to vote in favor of the amendment. From the analysis of the independent voting behavior theories it is clear that the interest group indicators and the constituency influence indicators do the best job in predicting the votes of legislators on the ADA-ADM question.

The results of the combined analysis also are presented in Table 50. In the first combined equation, five variables were shown to be related to the vote, four of which were strongly related to it -- the political party indicator, the MSTA membership indicator, the NEA membership indicator and the blue-collar indicator. Democrats and districts with high percentages employed in manufacturing tended to vote against the motion to weight the pupil count in favor of attendance, while districts having high concentrations of MSTA members and NEA members tended to vote in favor of the increased importance of attendance. The concentration of poor children indicator was also found to be moderately related to the vote, with districts with high concentrations of poor children tending to vote against the measure. The first combined equation correctly classified 85.6 percent of the representatives voting on the amendment.

In the second combined equation, where the change in aid indicator is included and the cues are substituted for the political party indicator, basically the same combination of factors was identified. The concentration of MSTA members and NEA members were both strongly related to the vote with districts having high levels of membership tending to vote in favor of it. In addition, cues from the Republican leadership and the Appropriations Committee were also related to the vote, indicating that Republicans were more likely than Democrats to vote in favor of it. The blue-collar indicator was strongly related to the vote while the concentration of poor children was only moderately related to the vote; however, in both cases the higher the concentration the more likely the legislator was to vote against this amendment. The second combined equation also correctly classified 85.6 percent of the legislators voting on the amendment. The results of the combined analysis indicate that interest groups were more influential on the vote than the constituency influences. In combination with the political party indicator or the cues, the interest group indicators did an extraordinary job of correctly predicting the votes of the majority of legislators on the amendment.

The Vote on the Perfected Version of HB 350

As was indicated earlier, the vote on HB 350 in the Missouri House in 1975 is particularly interesting because many of the reform components embodied in the school finance reform in 1977 were present in HB 350. The issues that were similar in the two pieces of legislation were the change in the way of counting eligible pupils, the way in which the minimum aid guarantee was computed, and the spending requirement for teacher salaries. The provisions included in HB 131 but not in HB 350 were the following: the guaranteed tax base add-on, the change in the state transportation aid formula, and the income factor adjustment to the tax levies of local school districts. The one issue in HB 350 that was focused on, but not discussed in HB 131, was a section on equalizing assessed property valuations. The comparison of the vote analyses on such similar bills should provide insight into the process by which legislators pass major school finance legislation (passed: Yes 123, No 31; however, HB 350 was not enacted into law).

Table 51 presents the results of the voting behavior analysis. The economic self-interest proxy, equalized assessed valuation per capita, was found to be strongly related to the vote; however, the direction of its sign was not expected. The analysis found that districts with high equalized assessed valuation per capita tended to vote in favor of the perfected version of HB 350. The median family income indicator, on the other hand, behaved much closer to expectations in that it was strongly related to the vote, with higher levels of median family income being opposed to this bill. In the interest group model only two indicators, high tax effort school districts and the concentration of poor children, were found to be related to the

Table 51

MISSOURI HOUSE, 1975
House Bill 350

The vote on HB 350 as perfected by the House.

	Voting Behavior Models‡						
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party	First Combined	Second Combined
Party affiliation					1.2819***	1.2949***	
Total equalized valuation	0.0004***						NE
Rural/urban lifestyle				0.0791		NE	NE
Desire for public services				1.5123***		1.3018***	1.4057***
Number of AFDC recipients			0.0448**			NE	NE
Percent employed in manufacturing (blue collar)			NE			NE	NE
Percent employed in wholesale/retail trades (small business)			NE			-0.0786*	-0.0758*
Number of Missouri State Teachers' Association members			NE			NE	NE
Number of Missouri NEA members			NE			NE	NE
Equalized tax rate			1.8124***			NE	NE
Median family income		-0.0002				-0.0001**	-0.0001*
CUES:							
Democratic leadership							NE
Republican leadership							
Democratic Education Committee							NE
Republican Education Committee							
Democratic Appropriations Committee							NE
Republican Appropriations Committee							-1.4666***

Table 51 (Continued)

MISSOURI HOUSE, 1975
House Bill 350

The vote on HB 350 as perfected by the House.

	Voting Behavior Models‡						
	Economic Self-Interest	Median Income	Interest Groups	Constituency	Party	First Combined	Second Combined
Intercept	0.3359	3.4015	-4.9716	1.8616	0.6007	5.1796	6.0496
-2 log likelihood	140.57	149.05	123.55	127.66	145.15	118.33	116.39
Model chi square	14.11	5.63	31.13	27.02	9.53	36.35	38.28
Percent correctly classified	79.9	79.9	79.9	79.9	79.9	82.5	82.5
Number of observations	154	154	154	154	154	154	154

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‡The cell entries are logistic regression coefficients and an indicator of significance.

*** if $p \leq .05$;   ** if $p > .05$ and $p \leq .10$;   * if $p > .10$ and $p \leq .30$;   NE = Not Entered.

vote. The high tax effort indicator was strongly related to the vote and showed that high tax effort districts tended to vote in favor of the legislation. The concentration of poor children indicator was only moderately related to the vote but also carried a positive sign indicating that areas with higher concentrations of poor children were in favor of the perfected version of HB 350. The constituency indicators showed mixed results. The rural/urban lifestyle indicator was unrelated to the vote on HB 350. However, the desire for public services indicator was strongly related, with its coefficient denoting that districts with higher taste for public services were more likely to vote in favor of the 1975 school finance proposal. The political party indicator was also strongly related to the vote with the Democrats much more likely to vote in favor of the reform bill than the Republicans.

The results of the independent voting behavior theory analyses indicated that no particular theory dominated the discriminating power of the remaining theories; however, it was clear that a number of groups favored the measure. The sign on the economic self-interest indicator and the high tax effort indicator suggests that there was a great deal of importance attached to the concern for equalizing assessed property valuation across school districts. In addition to the property wealthy and high tax effort school districts, the indicators of taste for public services, the areas with higher concentrations of poor children, and the Democratic party all favored the adoption of HB 350. All these characteristics were consistent with the interpretation that the 1975 school finance bill was favored by the metropolitan (i.e., higher assessed) districts in the state.

The combined equations for the analysis of this vote are also presented in Table 51. In the first combined equation, three variables are entered, with the desire for public services indicator and the political party indicator being strongly related to the vote. Democratic districts and districts with higher desires for public services were both found to be in favor of HB 350. The median family income indicator was weakly related to the vote and carried a negative sign indicating that lower levels of median family income were much more likely to vote in favor of the reform bill. The first combined equation correctly classified 83.1 percent of the legislators who voted on the bill.

The second combined equation was virtually a repeat of the first -- the desire for public services indicator being strongly related to the vote with districts having a high desire for public services much more likely to vote in favor of the reform. Likewise, the Republican cue was also strongly related to the vote and indicated that Republicans were much more likely than Democrats to vote against reform legislation. In the second combined equation, the median family income measure and the small business indicator were found to be weakly related to the vote. Both of these indicators carried negative signs on their coefficients indicating that higher income districts and districts with higher percentages of the work force employed in wholesale and retail trades were more likely to vote against HB 350. The second combined equation correctly classified 82.5 percent of the voting legislators.

It is clear from the results of the combined equations that districts with higher desires for public services and with Democratic representatives were very much in favor of the passage of HB 350. It is not a stretch of the imagination to consider these districts as the more metropolitan interests in the state. This statement points to the major difference between the vote on HB 350 and the vote that occurred on HB 131. In 1975, HB 350 focused its benefits more directly on the urban districts and as a consequence was unable to put together a broad enough coalition to pass the bill. The 1977 measure included the income factor and increased transportation aid which tended to benefit rural as well as urban districts. As a result the 1977 measure combined both urban and rural interests to form the coalition that passed HB 131.

IX. SYNTHESIS

This chapter attempts to step back from the results of the individual vote analyses in order to synthesize the evidence of what constitutes the major forces behind the behavior of state legislators on school finance issues. The chapter is organized by the comparisons that were incorporated into the study design. Information collected through the interview and data analysis processes are used to illustrate the comparisons.

Cross-State Comparisons

The one impression which clearly stood out in the research results was that each state has its own breed of school finance politics. From the metropolitan-outstate split in the Missouri legislature to the labor-management caste of politics in the state of Michigan, it was clear that the standard political indicators have adapted in each state to work within the context of the state's individual political culture. This is also true of the policy formation process. Not only are there major differences in the process itself, but there are major differences in the factors that influence the process. For instance, in the state of Michigan during the consideration of the school finance legislation in 1973, political party interests dominated the economic self-interest of the individual legislator's district. Though it was true that only a moderate amount of money was distributed through the 1973 legislation, it was indeed curious that Michigan legislators tended to vote with their political party rather than in the economic self-interest of their districts. In Missouri the situation was quite the opposite. The self-interest of the legislative district seems to have been well known to the legislator representing that district. In addition, the rural/urban coalition that was put together in order to pass HB 131 was forged in spite of political party ties. It should be noted that it seems to be much easier to forge a new coalition or to understand one's economic self-interest if there is a large increment of new money added to the system (the situation in Missouri). What was impressive about the state of Washington in its struggle to change its school finance system in 1977 was the ability of the legislature to focus on limiting the definition of basic education, even though available revenue was not a problem in the state at that time. The votes to expand the definition of basic education were opposed by the Washington Democrats who sought a simple definition.

As a result of the differences in political culture and political process in each of the three states, it was expected, and indeed found, that relationships between indicators and votes would not be exactly similar across states. In contrast, one of the most interesting findings of the statistical analysis has been that the results closely confirmed most of what was heard in the state interviews. The analyses have led to a better understanding of the policy formation process in a given state, but have not yielded a single theoretical factor that clearly distinguishes between votes in every legislative roll call situation. There are several reasons for the absence of a monolithic set of legislative voting behavior determinants. Later in the chapter, issue differences and individual theoretical variations will be discussed as reasons for the absence; however, as described above, the state political culture or *modus operandi* plays a very important role in determining what factors influence legislators' roll call votes. Those interested in the analysis of state political behavior are therefore encouraged to design studies that include a comparative state design in order to assure that their results are not biased due to the political culture of the state.

Cross-Issue Comparisons

The present study has examined numerous votes on various aspects of school finance and, in addition, a series of votes on certificate-of-need legislation for the health care industry. The votes on school finance legislation generally can be classified into three groups: amendments to the main legislation that redistribute funds in a manner differing from previous allocations, amendments that add regulatory guidelines to the education task performed by a school district, and finally votes on the entire legislative package. Regarding the last category, the complete legislative package, the amount of money that the school finance package infused into the system of funding public schools differed across the three states. In Michigan the amount of new money per pupil put into the system at the time of the SB 110 reform was small. In the states of Missouri and Washington, however, the school finance reform legislation was accompanied by a healthy increase in state aid per pupil to local school districts.

There were a number of interesting findings by category of vote that can be summarized across state settings. In the votes on amendments to directly alter the flow of state aid through the aid formula, it was uncanny how often the economic self-interest indicators were found to be related to the votes on these amendments. Although legislators as a whole have relatively little information available to them, it was clear that the legislators in the three states were able to collect enough information to define their districts' self-interest. Whether it is due to the use of information generated by computer simulations or to other types of communications, when an advantage is to be gained in the school finance reform process, legislators are able to determine what is best for their districts. Especially good examples of the phenomenon are the Taller and Fancher amendment (declining enrollment adjustment) in the state of Washington, the votes on the increase in minimum revenue and the cost index in the state of Missouri, and the vote on the third Bryant amendment (special education) in the state of Michigan.

The votes on the regulatory amendments considered in the analysis had a distinctly different set of variables that consistently explained them. Illustrations of the regulatory amendments include the votes in the state of Washington to expand the definition of basic education, and the vote in Missouri on local school district spending limits for teacher salaries. The theoretical concerns most likely to be related to the vote on these regulatory amendments were the more ideological of the theories including political party, the constituency, and the median income models. These theories tend to evoke the notion of the ideological roots of the legislator.

In the examination of the votes on the adoption of the complete package, there are two distinct patterns of influence, depending upon the amount of money put into the reform effort. In the state of Michigan, which changed its method for delivering state aid to local school districts but did not increase substantially the state share in funding public education, the major influences were ideological in nature. In the preliminary skirmishes on the complete package in Michigan, political party was the major factor determining votes on the legislation. In the final vote on passage of the Michigan school finance reform the most influential determinant of the vote was the median family income of the legislator's district. Economic self-interest and interest groups played a negligible role in the outcome of SB 110. In the final votes on the school finance reform packages in the states of Missouri and Washington, different factors were found to be related to the votes. Specifically, economic self-interest tended to be a strong motivating force in the determination of the legislator's vote. A number of the more ideological indicators, such as political party and constituency influence, were also found to be related to these votes but the important factor in Missouri and Washington was economic self-interest.

The votes analyzed on the certificate-of-need legislation were generally found to be related to both the economic self-interest indicators and the more ideological indicators. However, the self-interest indicators tended to dominate the explanation of the votes on this legislation. It is therefore observed that when there are significant winner and loser considerations in a piece of legislation, legislators will gather enough information to determine what category their district falls into and then vote accordingly.

Theoretical Comparisons

As described in the previous section, a typology can be built relating the individual models of legislative voting behavior to categories of issues being voted upon. However, such a typology does not necessarily contribute to the refinement of an integrated theory of state legislative voting behavior. In this section, what has been learned about voting behavior theory is described.

The individual theoretical models examined in the study tended to break down into two groups. The first of these is concerned with self-interest, defined as either the economic self-interest of the legislative district or the self-interest of various identifiable interest groups. The second of the two can be characterized as the ideological roots of the legislator, including such notions as political party identification, the parameters imposed by the legislator's constituency and the median income of the legislator's district. In a very intuitive way, these two sets of theoretical factors are closely related to the market framework discussed in Chapter II. The array of interests arranged according to their bids on a particular bill define the demand schedule. Individual characteristics of the legislator and some district characteristics specify the minimum price the legislator requires before supplying legislative services. The most difficult aspect still is the identification of the actual supply curve because it depends on which interest groups have bid for the legislation in addition to the political culture of the district and the facility of the legislator at building coalitions of interests within the district. The market framework is an intriguing way of organizing the individual theoretical concerns, although additional work is needed, particularly in the identification, estimation and separation of demand and supply forces.

One of the important features of the market framework is that the political culture of the state can be integrated with interest group pressures, economic self-interest and the district characteristics of the legislation. For example, it has been shown that the verification of the traditional theories depends on the states chosen for analysis. Hypotheses concerning the importance of the political party would receive strong support if the study was restricted to the state of Michigan. However, economic self-interest would receive greater confirmation if the state were Missouri, but political party also played a role. The market framework permits both to be evaluated. The most important drawback to the market approach concerns the fact that one model is being used to estimate a series of legislator decisions. At present, more work is needed to isolate those decisions.

Consequently, two findings have been made regarding the theoretical comparisons. First, there is no one "unidimensional" theory of state legislative voting behavior. Different theories control or emerge at various stages of the legislative process.

Second, the market approach, although in need of further refinement, seems to be a promising construct for analyzing the legislative process, and the voting behavior of legislators.

Policy Leadership Versus Voting Behavior

The present study found in its analysis of legislative policy leadership in the area of school finance that voting behavior and policy leadership are two distinct behavioral phenomena. According to the results of the analysis, legislative voting behavior is closely related to the interests found within the legislator's district and the political background of the legislator. On the other hand, the results of the leadership analysis indicate that the likelihood of the legislator occupying a policy leadership position is completely unrelated to characteristics of the legislator's district. Such a sharp contrast in the influence of the legislator's district on the two phenomena is probably due to a variety of reasons. However, the primary reason for a lack of a relationship between the occupancy of a policy leadership position and characteristics of the legislator's district is likely to be that a self selection process has separated those legislators who are interested in education from those who are interested in other legislative topics.

Evidence available indicates that there is no systematic relationship between a district's characteristics and the decision by a particular legislator to assume a policy leadership position in the area of school finance. However, there is some evidence that as legislative districts decrease in number and therefore represent large portions of the state's population, some relationships do emerge between characteristics of the district and the tendency to assume a policy leadership position. In the House of Representatives in the states of Missouri and Michigan, there were no relationships found between characteristics of the legislative district and the assumption of a policy leadership position. However, in the state of Washington and in the Missouri Senate with larger populations in the legislative districts, some relationships were identified. Further examination of the role of the size of the legislative district as an intervening variable in the relationship between the district's characteristics and the likelihood of a legislator assuming a policy leadership position.

The results of the present study in its analysis of legislative policy leadership have upheld several previous findings. As indicated by Rosenthal and Fuhrman (1981), policy leadership in education emanates from both the substantive committees and the money committees of state legislatures. The role of tenure as a determinant of who serves in policy leadership positions was also analyzed in the present study, and the results of the statistical analysis are mixed. In two of the four settings analyzed, tenure in the legislature was not related to policy leadership. In the other two cases, tenure was only moderately or weakly related to policy leadership. In those two cases, persons with tenure were likely to be those occupying policy leadership positions. As a consequence of these results, it is not possible to support the notion that policy leadership positions are generally held by those who have the greatest tenure in the legislature. On an individual basis, for every Representative Wayne Goode who was in an important leadership position in the state of Missouri with a moderately high level of tenure, there is a Representative Dennis Heck who was very influential in the state of Washington although only a freshman legislator.

The results of the analysis of policy leadership also provide clarification of one aspect of the market approach to understanding legislative voting behavior. The difference in the explanatory power between the legislator's personal characteristics and his/her district's characteristics was obvious. This reinforces the notion that the personal characteristics of the legislator determine his/her reservation wage, while the outside influences determine the demand for the particular piece of legislation.

An Over-time Comparison

If the cross-state comparisons were a convincing argument for the acceptance of the diversity of political culture found across the American states, the over-time analysis of school finance reform efforts in the Missouri House of Representatives clearly contributed to a furthering of that impression. The geneology of the 1977 legislative package considered by the Missouri House of Representatives was directly traceable to the 1975 school finance reform effort in that body. A comparison of the two pieces of legislation showed that many of the ideas contained in the legislation adopted in 1977 were also found in the 1975 legislative package, yet there were also important differences.

The one component that was deleted from consideration between the two years was the issue of equalizing local assessments. Two important additions were made to the 1975 package before it was considered in 1977, the guaranteed tax base add-on provision and the income factor adjustment to the property wealth provision. Finally, a series of issues remained consistent across the two bills, including the manner in which pupils were counted, the weighting factors included in the formula, the method of computing foundation aid and the requirements placed on local school districts for spending on teachers' salaries.

The 1975 school finance reform effort in the state of Missouri died in the Missouri Senate because the bill was perceived as being pro-metropolitan. If a new school finance system was to be adopted in the state of Missouri, it would have to appeal to a broader coalition of legislators than did the 1975 bill. It was to this end that the 1975 package was revamped and then resubmitted in 1977. (It should be noted that this revamping process did not just consist of a group of legislators sitting down to work out their differences, but rather had gained momentum from Governor Bond in his appointment of the Conference on Education and from a court challenge of the school finance system.) However, the progression in the development of the 1977 legislative package toward forging the rural/urban coalition which eventually passed the measure was easy to trace. The deletion of the equalized assessment issue removed a great deal of rural opposition to the bill, whereas the income adjustment to the property wealth provision brought a favorable response from rural districts. Finally, the inclusion of a guaranteed tax base add-on provision was perceived as doing something for the high effort suburban districts. For the most part, the urban districts were happy with the core package that remained intact from 1975. Each deletion and addition encouraged the formation of the coalition that eventually passed the reform legislation.

Implications for the Study for State Legislators

The study as it was originally conceived was not designed to have its results generalized to all states. However, there are a two contexts into which the results of the present study could be placed in order to speak to a broader state legislative audience. The first context is the typology of political cultures put together by Daniel Elazar in his book American Federalism: A View from the States (1972). Elazar describes three components of political culture that have developed in the United States, the individualistic, the moralistic and the traditionalistic. He then classifies the 50 states in terms of the predominance of each of these three components. The Michigan political culture is characterized as being primarily moralistic, along with the states of Vermont, Maine, Minnesota, Wisconsin, North Dakota, Colorado, Utah and Oregon. The political culture of the state of Washington, on the other hand, is characterized as having a mix of the moralistic and individualistic; the states of New Hampshire, Iowa, Montana, Kansas, South Dakota, California and Idaho also fall in this category. The political culture in the state of Missouri is characterized as both individualistic and traditionalistic with the states of Delaware, Maryland and Hawaii also in this category. Elazar's theory of political culture seems to be consistent with the results of the present study which showed the strong influence of political party in the states of Michigan and Washington and the importance of economic self-interest in the states of Missouri and Washington.

The other context into which the results of the study can be placed for the purpose of generalization concerns the type of legislative question that is being considered in the vote. Regulatory amendments -- those that require a specific action in local school districts -- have a distinctly different set of factors related to their vote than do amendments that distribute funds to local school districts. Votes on the former are often related to ideological factors such as political party and the orientation of the constituency. On distributive and redistributive issues, however, the primary determinant is often the size of the transfer to the legislative district. The distinction between these two types of votes was consistently found in the present research.

The present study found a major distinction between the factors that influence legislative policy leadership and those which influence legislative voting behavior. The policy formation process at the legislative level was dominated by two groups of legislators, the state education leaders and the "new ideas" legislators. However, once the legislation was developed and put to a vote, the leadership legislators were not a factor in its passage or rejection. The final outcome was determined by the ideology and background of the legislators and the economic benefit derived by the legislative districts. The determinants of leadership were not linked to the voting behavior of legislators in general, and the determinants of voting behavior were, for the most part, unrelated to leadership.

Two groups were identified within the policy leadership that led to the passage of school finance reform legislation. The two sets of people identified as key to the passage of school finance legislation were the education policy specialists, more commonly known as state education leaders, and a second group of legislators who contributed new ideas and/or new coalition-building skills to the passage of the reform legislation. Without both components of leadership, the reform legislation would not have been enacted. The state education leaders used the "new ideas" legislators to fashion a package to meet the requirements of all those voting in the full legislative body. The recruitment process to each of these two types of leadership is quite different. State policy leaders emerge after making a long-term commitment to the development of education policy. The "new ideas" legislators rise to the legislative leadership position in a much more serendipitous fashion.

While legislation development is dependent upon new ideas and traditional leadership, legislative voting behavior is dependent upon the political roots of the legislator. Taking into account the political culture of the state and the content of a particular vote, the voting decision of an individual legislator has been found in this study to be based upon the ideology of the legislator, the orientation of his or her constituency and the benefit of the legislation to the legislative district. Voting and policy leadership are clearly two distinct sets of behavior for state legislators.

Are there any keys to successful school finance reform efforts in state legislative settings? Two general themes are identified in the present study. First, neither party discipline nor district self-interest necessarily forge a winning coalition. The integration of new ideas and traditional approaches into a legislative package, however, does obtain such a coalition. Second, the new ideas that are woven into the legislative package must respond to the dimensions of the political culture along which the legislature has traditionally been divided. This enables the legislator, responding to his or her political roots, to react to the new legislative package in a positive fashion. The delicacy of the balance that is struck in legislative settings illustrates the need for the existence of a leadership that understands the political culture of a state and knows how to integrate new ideas into that culture.

Conclusions

The governance of public education today takes into consideration the wishes of policy makers at almost every level. However, if there is one group of decision makers whose importance in the decision-making process has recently been enhanced, it is state policy makers. In fact, it would be fair to say that in almost every policy arena, state government has increasingly played a much stronger role than it had in the past. Most prominent among the policy-making actors at the state level has been the members of the state legislature. What influences this key set of policy makers in their decisions on school finance and certificate-of-need legislation has been the line of inquiry pursued by this study.

The study has taken an in-depth look at the influences on state legislative voting behavior. Toward that end, information was gathered from local school districts, from the U.S. Census, from county information files and from legislative sources in order to have an accurate picture of the characteristics of the legislator and his/her legislative district to use in the analysis. Further, interviews were conducted in each of the three states with members of the legislature and with key staff persons familiar with the process by which the school finance legislation was adopted. A series of votes were then examined in each of the three states on school finance questions using the data collected from the quantitative sources and from the interviews to identify what had influenced each legislator in his/her roll call vote decision.

As in most research efforts, this study encountered the traditional problems of obtaining appropriate indicators for its theoretical concepts. However, it is felt that each of the indicators used are closely enough related to their intended concepts that no major sources of measurement error were introduced. On the other hand, the ability to use logit analysis in the estimation of the various theoretical impacts was a significant plus to the analysis. Logistic regression techniques have significantly clarified the ability of analysts to understand 0,1 decisions such as roll call voting.

There are four major conclusions that can be drawn from the analysis:

- A particular state legislature's mode of operation in conjunction with the political culture of that state is quite important in the determination of what factors influence legislators' votes on key policy questions.
- Each individual question before a legislature carries with it a particular framework by which the legislature understands how to consider it. For example, a typology of issues can be drawn such that legislators consult different indicators for each group in the typology in order to determine their voting position. The typology found in the present analysis included votes that redistributed funds, votes that imposed stronger regulations on local school districts and votes that were taken on the entire school finance package.
- Authors in both the political science and economics literatures have studied legislative voting behavior under a variety of different rubrics. These theoretical frameworks can be analyzed individually or integrated into a larger theoretical framework that allows for the evaluation of each of the individual concerns. It is found that the market for legislative action described above is a promising way of integrating the individual concerns of each of a set of legislative voting behavior theories.
- For the most part, this study focused on the legislative voting behavior; however, one of the comparisons made in the study was between voting behavior and legislative policy leadership. It was concluded that these two legislative behaviors were not related to one another. Legislative policy leadership seemed to be related to the characteristics of the individual and his/her policy interests while legislative voting behavior was for the most part related to characteristics of the legislator's district.

In spite of the suggestions of many students of state politics who feel that little can be gained from a study of roll call voting in state legislatures, the authors have been particularly gratified by the outcome of this analysis. Such an analysis of state legislative voting behavior in conjunction with in-depth case studies presents the researcher with a good understanding of the forces behind, and the process of, policy development.

APPENDIX A

GUIDE FOR INFORMANT INTERVIEWS

Key: Capital letters indicate major questions.
Numbers indicate follow-up questions.
Dashes indicate the type of information sought.

WHO WERE THE PARTICIPANTS?

Our purpose in the following set of questions is to identify legislators who actively participated in the passage of the school finance legislation in (state, year). The first two questions concern the identification of "key" legislators in the finance reform process. A "key" legislative role in this context would mean that a legislator actively worked to persuade other legislators, interest groups and educators to support the legislation by providing them with information about the bill or by exerting whatever political pressure they could bring to bear.

A. From this list of state legislators, would you please indicate which legislators played key roles in support of (bill number)?

B. Would you also please indicate which legislators played key roles in opposing (bill number).

In addition to legislators in key supporting and opposing roles, we would like to identify those legislators that supported or opposed (bill number) in a manner that was less active than the key actors but was more involved than those who simply cast their votes on the legislation. This degree of involvement would be characterized by publicly endorsing or opposing the bill, attending meetings where the merits of the legislation is discussed, etc.

C. Would you again look at the list of legislators and indicate which legislators would be included in this secondary level of supporting the legislation?

D. Which legislators would be included in this secondary level of involvement who opposed the legislation?

E. From the group of legislators identified above, would you pick one or two and briefly describe the nature of their involvement?

F. For those same couple of legislators, do you have any insights as to why they became involved?

WHAT OTHER POLITICAL FACTORS INFLUENCE DECISION MAKING ON SCHOOL FINANCE REFORM LEGISLATION

I. The Influence of Constituents

A. Was there any grassroots constituent support or opposition for the school finance reform in (year)?

B. How would you describe those constituents?

- Liberal-Conservative

- Rural-Urban

- Fiscally conservative

- Other demographic information
    - many older persons?
    - many children?

- Commitment to education

- Democratic -- Republican

C. Did legislators ever feel that they received a "clear message" or "mandate" from their constituents concerning how to vote on the school finance reform legislation?

1. How about on the more technical votes and amendments?

II. The Influence of Interest Groups

A. What interest groups were involved in the development of the reform legislation? How would you characterize that involvement?

- Teachers

- Taxpayers

- Parents

- School administrators and board members

- Business community

- State education department

- Legislative service agency

- Good government groups

B. How did these groups help legislators make decisions on the school finance reform legislation?

- Remind you that education is important to the state
- Provide general information about problems (either numerical analysis or anecdotal evidence)
- Present specific information about a problem and offer solutions

C. How do legislators evaluate the information provided by these groups?

1. What criteria do you use?
2. Is self-interest perceived negatively in your evaluation?
3. Which interest groups provided the best (i.e., useful and accurate) information?

D. Which interest groups were most important politically in this state on the finance reform issue?

III. The Influence of Other Legislators

A. In this legislative situation, where were the important decisions on the reform legislation generally made?

- In substantive committees
- On floor on second or third reading
- In conference committees
- Informally
- Interim committees
- Money committees
- Governor

IV. A. In sum, how would you rank the relative importance of constituents, formal and informal interest groups and the work of other legislators in the legislature's decision making process on the school finance reform legislation?

V. The School Finance Reform Legislation

A. What were the main issues involved in the passage of the school finance legislation?

1. What were the distribution problems?
   - taxpayer inequity
   - need inequity
   - expenditure inequity

2. What were the political conflicts?
   - urban-rural
   - upper chamber-lower chamber
   - special issues (i.e., desegregation)

3. What was the state's revenue position?
   - high growth to large decline

B. Why was the school finance reform legislation passed in this legislative session rather than in earlier or later sessions?

1. What was the educational climate throughout the state?

2. Who were the active interest groups?

3. Were there constituent demands?

4. Was there any interim committee activity?

C. What persons and/or information were particularly influential in decisions on the reform legislation?

1. Who?
   - What type of person or interest group

2. What information?
   - impact studies
   - perception that education in state is lagging
   - interim committee report

3. What was the role of the political parties?

4. Were there any regional differences in opinion?

D. What were the major pitfalls that had to be avoided while guiding the new piece of legislation through the legislature?

E. From your perspective, why did some legislators vote against the bill and the committee amendments?

APPENDIX B

INFORMANTS IN THE THREE STATES

Michigan

Gene Caesar, Independent consultant working with the Michigan state government on education matters; (formerly: Educational Consultant to the Michigan State Senate)

Dr. James Phelps, Associate Superintendent of Elementary and Secondary Education; (formerly: Administrative Assistant for Education in the Office of the Governor)

Douglas Smith, Director for Policy and Legislation, Department of Commerce; (formerly: Special Assistant for Education to Governor Milliken)

Kathleen N. Strauss, Associate Executive Director for State/Federal Relations, Michigan Association of School Boards; ECS Commissioner

Missouri

Dr. Bonita Campbell, Legislative Liaison, Missouri School Boards Association

Dr. John E. Moore, Jr., Assistant Commissioner, Division of Administration, Missouri State Department of Elementary and Secondary Education

Clark Payne, General Tax Supervisor, Southwestern Bell Telephone Co.; (formerly: member of Governor's Conference on Education)

Dr. William K. Ray, Assistant Executive Secretary, Missouri State Teachers' Association

The Honorable Gary D. Sharpe, State Representative; ECS Commissioner

Dr. William Wasson, Deputy Commissioner, Missouri State Department of Elementary and Secondary Education

The Honorable Truman Wilson, State Senator

Washington

The Honorable Albert Bauer, State Senator; (formerly: State Representative)

Joe Dear, King County Labor Council; (formerly: Lobbyist, People for Fair Taxes)

Dr. Diana Hadden Gale, Director of Legislative Policy, Seattle City Council; (formerly: Chair, Citizens for Fair School Funding)

William V. Lahmann, Assistant Executive Director, Washington Association of School Administrators; SEPS Coordinator

Dr. Terry McCarthy, Administrative Assistant, Budget Liaison for Superintendent of Public Instruction; (formerly: Assistant to Superintendent of Public instruction)

The Honorable William Polk, State Representative

Dwayne Slate, Senior Research Analyst, Senate Democratic Caucus; (formerly: Staff Director, House Democratic Caucus and House Education Committee)

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